J. S. BACH'S VIOLONCELLO PICCOLO

by

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To Dr. Akira Otsuki, my father

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Nine church cantatas by Johann Sebastian Bach (1685-1750) call for the instrument that he terms *violoncello piccolo*. This instrument, just like the instrument *corno da tirarsi* (slide horn) that he also calls for in his cantatas, can be conceived by its name, but was not clearly defined by his contemporaries. As the name indicates, it would have been a small cello—but the inevitable question is how small it actually was. Studying the violoncello piccolo parts from those cantatas reveals that it should have the E4 string unlike a typical cello, but that does not quite indicate the size of the instrument. The questions such as whether it is identical to the *viola pomposa* and whether it is the instrument Bach intended for his solo Suite VI, BWV 1012, surely follow. To properly investigate what kind of instrument the *violoncello piccolo* was for Bach, an organological survey of the instrument *violoncello* is needed.

1.1. Violoncello

The Italian term *violoncello* can be broken down into three parts: namely, the noun *viola* (likely to have meant any bowed string instrument around 1500), the superlative suffix *-one,* and the diminutive suffix *-cello*. To be specific, it meant a small violone. The violone now is considered the direct precursor of the double bass, but for the most part in the Italian baroque, it was likely to indicate a large bass instrument of the violin family.[1]

Stephen Bonta convincingly argues that the development of the instrument *violoncello* was about the invention of wire-wound gut strings. He explains that what early violin and gut-string makers struggled with, before the dawn of the wound strings, was the flexural stiffness of (especially) the lowest

[1] Tharald Borgir, Stephen Bonta, and Alfred Planyavsky, "Violone," (Oxford University Press, 2001). https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000029478.

string of any violin-family instrument.[2] For instance, a normal cello (68 cm vibrating string length, tuned at A=415 Hz [viz. A3 at 207.5 Hz]) may have the top A string which is 1.20 mm in diameter. At the same length, the bottom C string (C2 at 61.7 Hz) in the plain gut would need to be about 3.30 mm in diameter at 8 kg (average) tension.[3] The challenge was to find a way to keep the bottom string at a small-enough diameter yet add sufficient density to produce a nice sound at the appropriate pitch. Bonta also adds that the composers tended to underuse the bottom string of all violin-family members until late in the 17th century;[4] I presume that the problem was more urgent for the larger bass instruments as the length of the strings affected the playability; the strings with more density allowed their lengths to be considerably shorter at the same pitch.

The first time the term *violoncello* appeared in literature was in 1665,[5] in a publication (12 sonatas, Op. 4) by Giulio Cesare Arresti (1619-1701), who lived in Bologna. The city was known for its gut-string manufacturing of lower strings as reported by John Dowland already in 1610.[6] Bonta proposes that it was the Bolognese makers who finally developed the wound strings in the 1660s, and those strings consequently allowed the luthiers to build smaller violones, that is to say violoncellos, that still produced the sonority of larger counterparts.[7]

As the newly-developed wound gut strings spread across Europe through Venice, so did the term *violoncello* and the works that specifically call for it. Bologna also produced a few notable cello-playing composers who also featured the violoncello in their works, namely Domenico Gabrielli (1659-1690;

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[2] Stephen Bonta, "From Violone to Violoncello: A Question of Strings?," *Journal of the American Musical Instrument Society* III (1977): 17, http://www.earlybass.com/wp-content/themes/publication/images/from_violone_to_violoncello_a_question_of_strings.pdf.
[3] Calculated using the Gamut String Calculator, http://www.gamutstrings.com/calculators/calculator.htm.
[4] Bonta, 17.
[5] Bonta, 18.
[6] Robert Dowland, *Varietie of Lute Lessons* (London, 1610), 13. https://imslp.org/wiki/A_Varietie_of_Lute_Lessons_(Dowland,_Robert).
[7] Bonta, 19.

known as a cello virtuoso), as well as Giuseppe Jacchini (c. 1663-1727), and Giovanni Bononcini (1670-1747).[8]

Based on the observation above, one may define the term *violoncello* from the late 17th century as being the bass instrument of the violin family that features the wound strings and smaller than the violone. However, unlike the violin (It.: *violino*—'small viola') which was already well developed and had commonly accepted tuning and size by the early 17th century, the violoncello was still relatively new around the end of the century with no uniformity. Since the availability of the wound strings influenced the actual designing process of the instrument, the standardization of the violoncello needed to wait for the dissemination of those strings. Antonio Stradivari seemed to have perfected the design of the violoncello in 1707 with the body length of about 76 cm with the vibrating string length of 68 to 69 cm.[9] Until his model got accepted as a standard across Europe, the instruments came in many different sizes, and the players seemed to adopt different playing postures depending on the playing technique and/or given circumstances.

1.2. Violoncello da Spalla

Due to its varied size and playing circumstances (e.g. playing the instrument from behind the organ gallery railing in a church), the early violoncellists adopted a few different postures to hold and play the instrument. The iconographic and documentary evidence makes it indisputable that they did not always hold the instrument between their legs; it was rather common to hold it horizontally across the chest or on the shoulder (Figures 1.1-3), or sometimes put it vertically on something like a stool, in the baroque. Leopold Mozart inserts the following line in the 1756 description of the viola da gamba: "Nowadays the Violoncello is also held between the legs, [...]."[10]

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[8] Bonta, "From Violone," 13-14.
[9] Stephen Bonta et al., "Violoncello," (Oxford University Press, 2001). https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000044041.
[10] Leopold Mozart, *A Treatise on the Fundamental Principles of Violin Playing*, trans. Editha Knocker, Early Music Series 6, (Oxford University Press, 1985), 11.

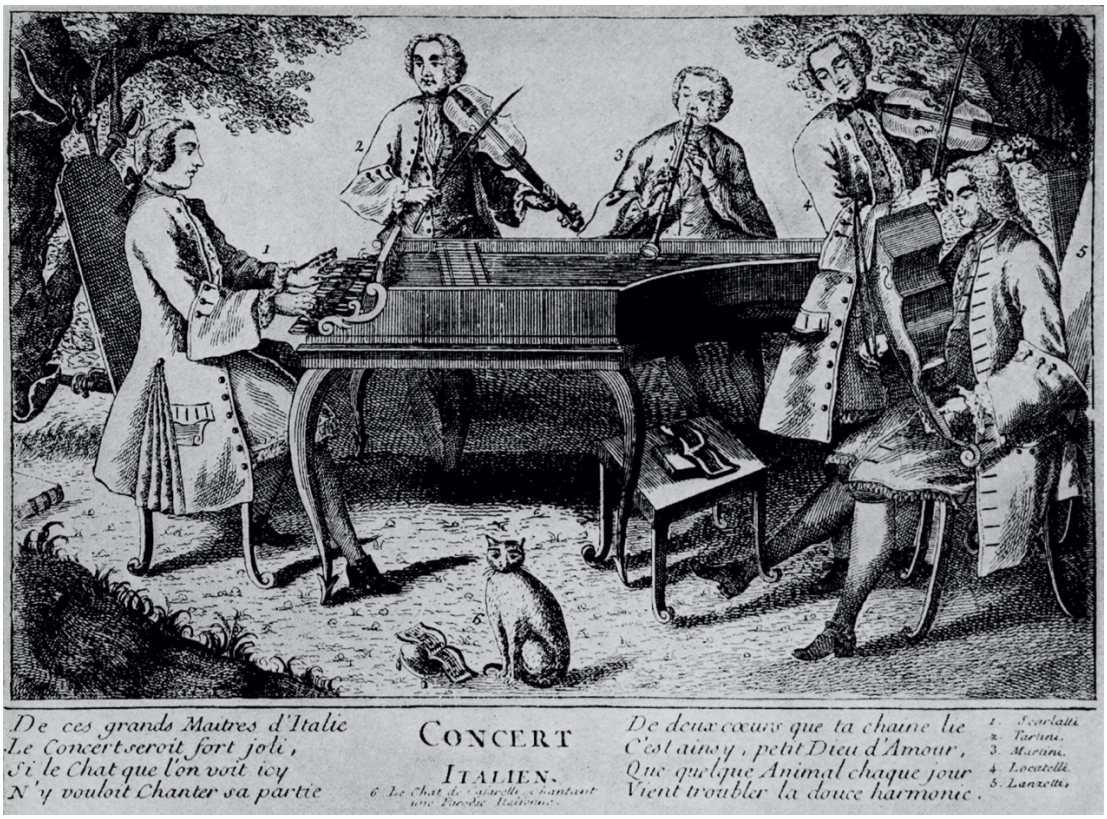

Figure 1.1. *Concert Italien* (n.d.), printed in *The Orchestra and its Instruments* by Esther Singleton (pub. 1917), in between pp. 182 and 183. Ensemble by Scarlatti, Tartini, Martini, Locatelli and Lanzetti (cellist).

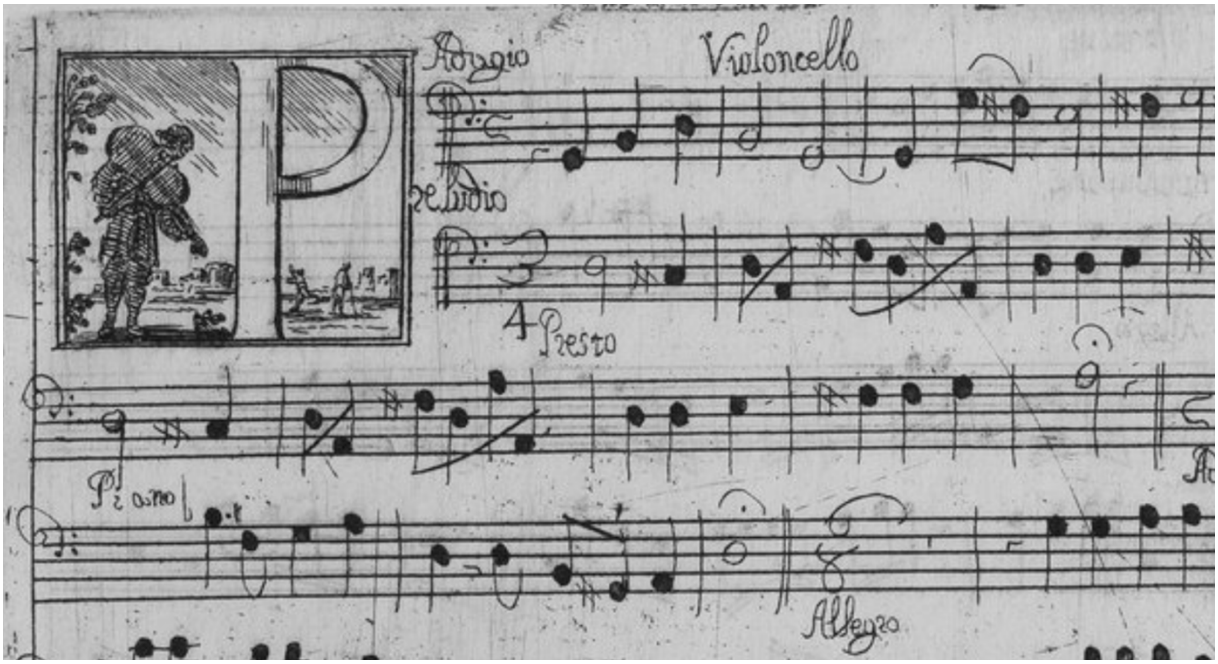

Figure 1.2. The Violoncello Partbook (detail), *Concertino per camera a Violino e Violoncello*, Op. 4 by Giuseppe Torelli (pub. 1688, Bologna).[11]

[11] The engraver Carlo Buffagnotti was known as a cellist.

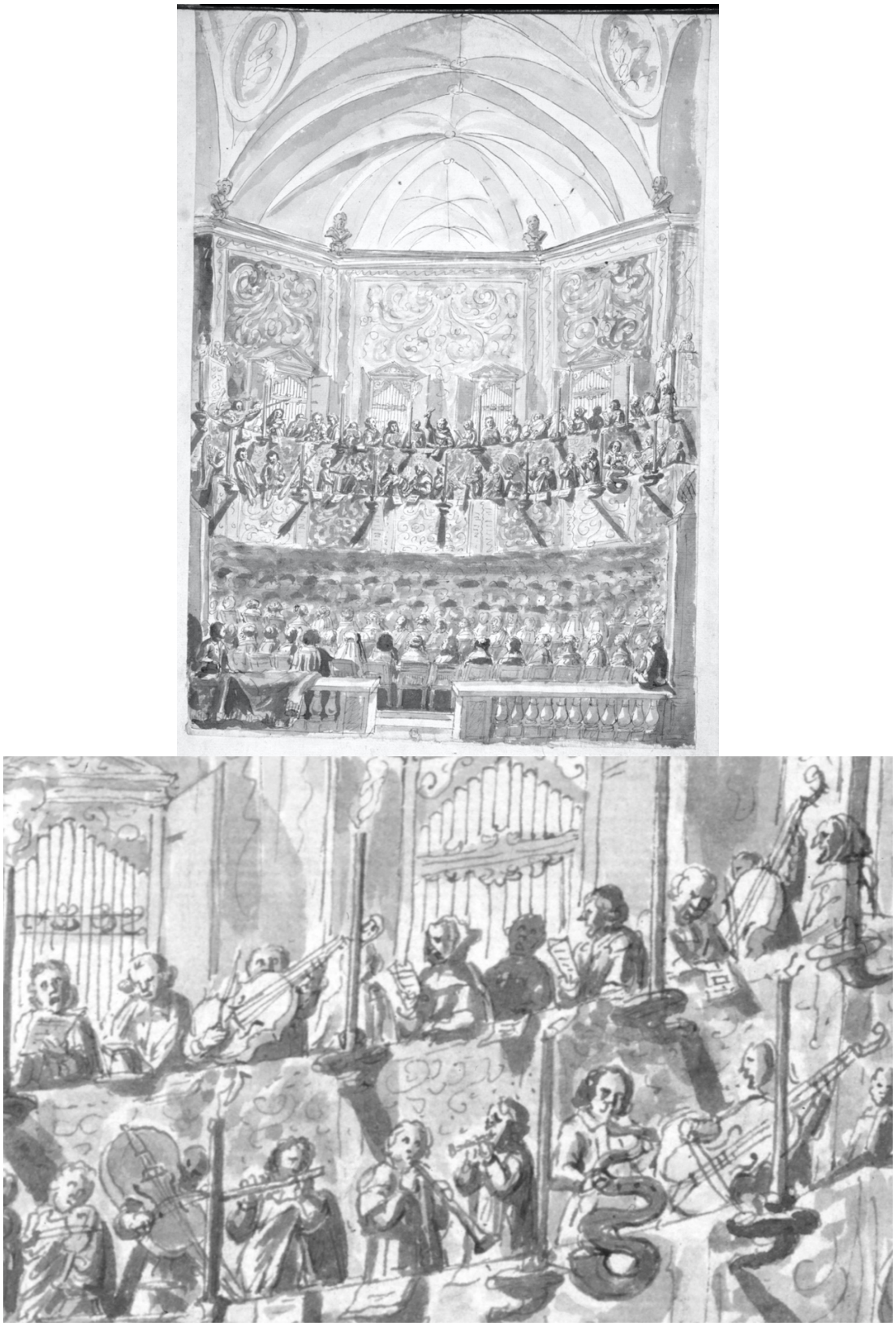

Figure 1.3. Pierre Paul Sevin (1650-1710): *Konsert av sångare och musiker, framförd för en förfinad publik* (whole image [top] and detail [bottom]); Drawing, NMH THC 3628. Courtesy of the archive of Nationalmuseum, Stockholm.

In 1694, Bartolomeo Bismantova adds in his *Compendio Musicale* from 1677 a chapter on the violoncello. He gets specific about its holding position, and he calls it *il Violoncello da Spalla* (the shoulder cello).[12] Although he does not explain in detail how to hold the instrument, from the diatonic fingering in the fingering/tuning chart that he provides, his violoncello must have been relatively small and easy to hold across the chest (Figure 1.4).

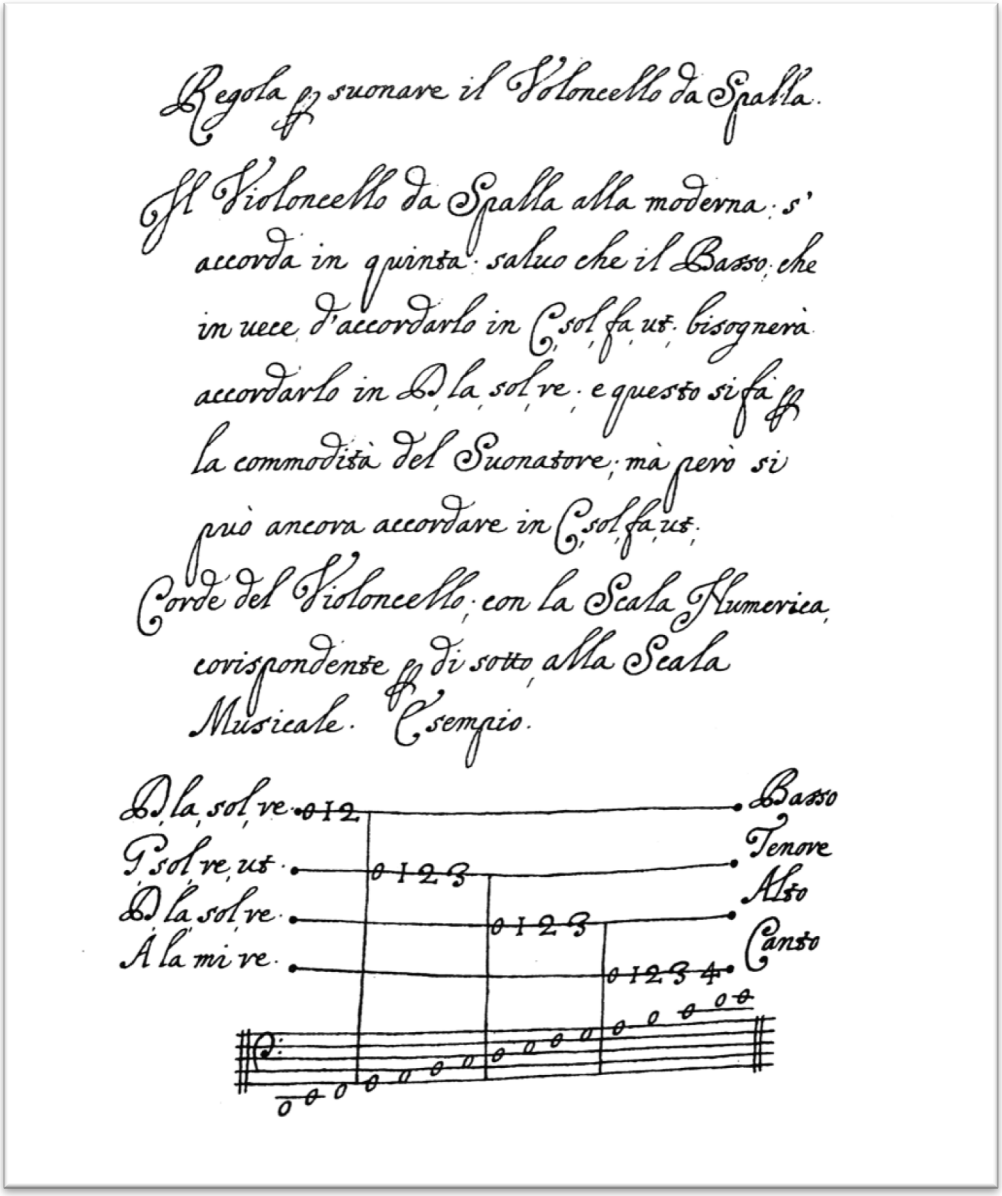

Figure 1.4. Bartolomeo Bismantova, *Regola per suonare il Violoncello da Spalla*, Compendio Musicale, Ferrara, 1677; current article added in 1694.

[12] Bartolomeo Bismantova, *Compendio Musicale: Ferrara 1677* (Firenze: Studio per edizioni scelte, 1978).

The way he calls it *il violoncello da Spalla alla moderna* (the modern shoulder cello) tells that this instrument was still relatively new in 1694; Bismantova could have meant that his violoncello was one of those newly-built violoncellos that fully utilized the wound strings. He explains that the strings were tuned in fifths except for the lowest string which was tuned as D, and "[…] this is done for the convenience of the player, although it is possible to tune it in C."[13] This lowest string tuned in D may also be indicative of the smaller size of the violoncello da spalla; the string tuned to C perhaps was on the verge of being too low for its size.

The most complete description of the violoncello da spalla, including some details about how to hold it, was given by Johann Mattheson in his *Das neu-eröffnete Orchestra*:

> The excellent Violoncello, the Bass Viola, and the Viola di Spala [*sic*] are small bass violins in comparison with the larger ones, with five or six strings, whereupon one can do all sorts of fast things, variations, and styles with easier work than on the larger machines. Particularly the Viola di Spala, or Shoulder-Viola, has a great effect on the accompaniment because it can cut through strongly and the sound can be expressed purely. A bass can never be more distinct and clearer than on this instrument. It is attached to the chest with a band, and pushed into the right shoulder, so to speak, and has nothing to stop or prevent its resonance in the slightest.[14]

[13] "[...] *questo si fa per la comodità del Suonatore ma si può ancora accordare in sol fa ut.*" Bismantova, *Compendio Musicale: Ferrara 1677*.

[14] "Der hervorragende Violoncello, die Bassa Viola und Viola di Spala, sind kleine Bass-Geigen / in Vergleichung der grössern, mit 5 auch wol 6. Saiten / worauff man mit leichterer Arbeit als auff den grossen machinen allerhand geschwinde Sachen / Variationes und Mannieren machen kan; insonderheit hat die Viola di Spala, oder Shulter=Viole einen grossen Effect beim Accompagnement, wiel sie stark durchneiden und die Tohne rein exprimiren kan. Ein Bass kan nimmer disticter und deutlicher herausgebracht weden als auff diesem Instrument. Es wird mit einem Bande an der Brust befestiget, und gleichsam auff die rechte Schulter geworffen / hat also nicht / daß senem Resonanz im geringsten auffhält oder verhindert." Johann Mattheson, *Das neu-eröffnete Orchestre* (Hamburg, 1713), 285.

This description was cited with small edits by Johann Gottfried Walther in his *Musicalisches Lexicon* (1732) under the entry *violoncello*.[15] Walther's alterations include the addition of the four-string model to five- and six-string models Mattheson included. Mattheson and Walther's *Viola di Spala* is undoubtedly the violoncello da spalla, and they make it clear that the instrument, supported with a strap and pushed into the player's right shoulder to be played, was also familiar in Germany. Moreover, they considered this instrument to be mainstream enough to include in their publications. The terms *violoncello piccolo* and *viola pomposa* are not mentioned. Also, if the viola da spalla was held with its end side pressed into a player's shoulder, its neck/fingerboard area needs to be within the player's comfortable left-hand reach; i.e. the instrument needed to be considerably smaller than the Stradivari standard.

In summary, a violoncello da spalla then would have been a smaller violoncello, small enough to play with the diatonic fingering like the violin, that one can hold with the strap at a horizontal or oblique angle, with its end-side pushed into the player's right shoulder. But it was not called *violoncello piccolo*.

1.3. Viola Pomposa

Since the intention of this chapter is to survey the instrument *violoncello*, the focal point here is to figure out whether the viola pomposa can be considered a kind of violoncello. Regarding the details of the instrument, one can refer to the past thorough research done by Francis William Galpin and Ulrich Drüner, among others, along with the excellent summary by Dmitry Badiarov.[16] The concise *viola pomposa* entry in the Grove Music encapsulates the studies done by the aforementioned, and states that

[15] Johann Gottfried Walther and Friederike Ramm, *Musicalisches Lexicon, oder, Musicalische Bibliothec: Studienausgabe im Neusatz des Textes und der Noten*, Bärenreiter Studienausgabe, (Kassel: Bärenreiter, 2001), 573-74.
[16] Dmitry Badiarov, "The Violoncello, Viola da Spalla and Viola Pomposa in Theory and Practice," *The Galpin Society Journal* 60 (2007), http://www.jstor.org/stable/25163896.

the viola pomposa is a five-string viola, tuned like a regular viola with an additional E5 string.[17] J. S. Bach often gets mentioned as the inventor of this instrument, but the Grove entry clarifies as follows:

> The invention of the instrument was erroneously ascribed to J. S. Bach by several late 18th-century writers, apparently because they confused the viola pomposa with the violoncello piccolo which J. C. Hoffmann of Leipzig made for Bach and for which Bach occasionally wrote.[18]

The term *viola pomposa* is still used to designate very small violoncellos in publications and museums due to this confusion, but the recent consensus seems to be that a viola pomposa is not a violoncello.

1.4. Violoncello Piccolo

In modern terminology, a violoncello piccolo would most often imply a five-string cello. In the case of a baroque instrument specifically, a five-string cello would naturally be smaller than the Stradivari standard for the better gut string performance of the top E string. According to Mimmo Peruffo's working gut string index, the vibrating string length should be around or shorter than 64 cm, ideally, to have a stable and longer-lasting E string at A=415 Hz.[19] In the baroque, however, as Marc Vanscheeuwijck points out, the term *violoncello piccolo* is found only in Bach's music.[20] As far as we know, a five-string cello with the high E4 string on top was not called *violoncello piccolo* specifically in the baroque. Thus the term could have implied a very specific instrument that existed in Bach's circle, at least initially. The Grove Music citation regarding the viola pomposa above states that the violoncello piccolo was made for

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[17] Howard Mayer Brown, "Viola pomposa," (Oxford University Press, 2001). https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000029453.

[18] Brown.

[19] Working Gut String Index is calculated using the formula: string length (m) x frequency (Hz). The index number of about 200 or below is considered safe and stable. 200 ÷ 210.5 Hz = 0.644 m [64.4 cm]. "What is a string's breaking index?," Early Music String – Frequently Asked Questions, Aquila Corde Armoniche, accessed October 18, 2019, https://aqauilacorde.com/en/early-music-faq/.

[20] Marc Vanscheeuwijck, "Recent re-evaluations of the Baroque cello and what they might mean for performing the music of J. S. Bach," *Early Music* 38, no. 2 (2010): 186, http://www.jstor.org/stable/40731346.

Bach by J. C. Hoffmann,[21] and that is a notion that is generally accepted despite the lack of contemporary evidence. In order to further investigate Bach's violoncello piccolo, a survey of the Hoffmann instruments is needed.

1.5. J. C. Hoffmann's Violoncello Piccolo

There are a few instruments extant built by the Leipzig luthier and Bach's colleague Johann Christian Hoffmann (1683-1750) that are supposed to be five-string cellos yet their sizes are comparable to the larger violas, or even to 1/10 fractional cellos. Some were designated as violas pomposa due to the aforementioned confusion, but those Hoffmanns are the instruments generally accepted as Bach's violoncellos piccolo as of late. The recent catalog of all known instruments by Martin (father) and J. C. Hoffmann, compiled by Veit Heller et al., allows the comparison.

Table 1.1. Known Violoncellos Piccolo by J. C. Hoffmann.[22]

Catalog Number	Collection or Attribution	Year Built	Remarks
JCH 27	University of California, Berkeley, Salz Collection of Stringed Instruments	1731	Rib height presumably original; Neck with pegbox and scroll (type B) presumably original but neck angle altered; neck width narrowed toward the nut; filled end-hole just under the end-button (for the strap?); pegs, fingerboard, tailpiece, and bridge not original (a 1950 account)
JCH 30	Museum für Musikinstrumente der Universität Leipzig, Inv.-Nr. 918	1732	Original rib height; neck angle altered; original scroll (type B); pegbox original but the size reduced; open end-hole just under the end-button (for the strap?); "The instrument had been converted into a viola in the 19th century and was restored to its original condition as Viola pomposa in the museum workshop. Tailpiece, neck, and fingerboard had to be replaced on this occasion; the scroll, which still had a fifth peg hole, remained original." (Kinsky 1912, p. 555.)

[21] Brown, "Viola pomposa."
[22] Eszter Fontana et al., *Martin und Johann Christian Hoffmann : Geigen- und Lautenmacher des Barock : Umfeld - Leben - Werk* (Leipzig: Friedrich Hofmeister Musikverlag, 2015), 191-217, 392-405.

JCH 31	**Missing**; privately owned until 1939 by Albin Wilfer (1870-1939)	1732	All information based on Paul Rubardt and Georg Kinsky's accounts; "a small hole in the rib for the strap under the end-button" (Rubardt); the low rib height (c. 3.8 cm) should be the result of a subsequent trimming to about half of the original height; semicircular hole in the lower block at the bottom plate also suggests the taller original rib height; original neck; no photos
JCH 35	**Wartime loss**; until 1945: Museum für Musikinstrumente der Universität Leipzig, Inv.-Nr. 917	1737	The only four-string instrument in the catalog with "violoncello piccolo" designation; all information based on Georg Kinsky's account; comparing with the five-string counterparts, c. 2 cm shorter body length and c. 2 cm shorter rib height may suggest a different design for a different purpose
JCH 42	Musée des Instruments de Musique, Bruxelles, Inv.-No. M 1445	After 1740	No date on the label; rib height cut shorter; a new bass bar glued in; original neck still fixed with two original nails but the angle not original; original scroll (type C); shows Hoffmann's later phase (after 1740)
JCH 46	**Wartime loss**; until 1945: Museum für Musikinstrumente der Universität Leipzig, Inv.-Nr. 919	1741	Pre-1945 photographs (front and treble side views, oblique front view on the bass side) exist; all information based on Georg Kinsky's account; the neck presumably original

There are six instruments with "violoncello piccolo" designation in the catalog, and only three extant. None of those surviving instruments are in the original state as J. C. Hoffmann left them, and they all went through some kind of later modifications,[23] as that would be the case for the vast majority of the surviving baroque instruments. However, they ended up avoiding major modifications to the upper and lower plates, thus retaining the overall body size close to the original state. As Heller points out, proportionally speaking, Hoffmann's violoncellos piccolo follows his cello model with a higher upper-to-lower bout-width ratio; his cello JCH 20 (1729) and the Brussels violoncello piccolo JCH 42 correspond almost exactly.[24]

[23] Fontana et al., *Martin und Johann Christian Hoffmann*.
[24] Fontana et al., 202.

Table 1.2. Dimensions & Measurements of Hoffmann's Violoncellos Piccolo.[25]

Instrument	Total length (cm)	Body length (cm)	Body Width (cm)			Rib Height (cm)	Neck Mensur (cm)	Body Mensur (cm)	Vibrating String Length (cm)
			Upper Bout	Center Bout	Lower Bout				
JCH 27 *Berkeley*	76.3	T: 45.6 B: 45.4	T: 21.2 B: 21.3	T: 15.3 B: 15.2	T: 26.7 B: 26.9	8.1-8.4	17.2	24.0	41.2
JCH 30 *Leipzig*	77.2*	T: 45.6 B: 45.3	T: 21.0 B: 21.3	T: 15.0 B: 14.6	T: 26.6 B: 26.7	7.9-8.3	18.4*	24.4	43.5*
JCH 31 *missing*	76.5†(R) 76.3 (K)	T: 45.5 B: 45.5	21.5 (R) 21.0 (K)	–	26.8 (R) 27.0 (K)	3.6 (R) 3.8 (R)	–	24.4	41.6 (R) 41.5 (K)
JCH 35 *4-string; lost*	75.5†	43.5	25.8	–	30.5	7.0 (incl. edges)	–	–	–
JCH 42 *Brussels*	75.5	T: 45.5 B: 45.4	T: 21.2 B: 21.3	T: 14.5 B: 14.4	T: 26.3 B: 26.5	6.0-7.1	17.6	24.6	42.5
JCH 46 *lost*	78.0†	45.5	21.5		27.0	8.8 (incl. edges)	17.4**	24.5**	41.9**

T: Top plate; B: Bottom plate
* measurement does not refer to the original state
† measured over bulge
** value after trigonometric evaluation of the available images
(R): Paul Rubardt; (K): Georg Kinsky

The data above show that the lost JCH 35, the sole four-string instrument in the group, was unique. Its body was much wider, yet about 2 cm shorter than the others. Seeing that the body sizes of the other five instruments are almost identical (within tolerance) except the rib height of JCH 31 (likely a 19th-century alteration), it is likely that JCH 35 was of a different model altogether.[26]

Three surviving violoncellos piccolo have something in common other than just the body size and proportion. They all show scratches and/or imprints around the end-buttons that seem to indicate that the neck straps were attached there.

One could say that Hoffmann's violoncellos piccolo are all violoncellos da spalla, although not all violoncellos da spalla should be considered violoncellos piccolo. The Hoffmann violoncellos piccolo are incomparably smaller than anything else that I am aware of from the first half of the 18th century.

[25] Fontana et al., *Martin und Johann Christian Hoffmann*.
[26] Fontana et al., 202.

Chapter 2: The Violoncello Piccolo Disputation

Hoffmann's violoncellos piccolo have been familiar to the public; some makers in the past built Hoffmann-type instruments as violas pomposa. Adolf Busch (1891-1952), a legendary violinist and composer, owned and played a Hoffmann replica built in the 1920s by his father Wilhelm Busch.[1] However, it is only after 2005 that this instrument's popularity has grown. Dmitry Badiarov, a luthier and violinist, made a Hoffmann-sized violoncello da spalla in 2005, and since then has been steadily producing high-quality instruments of this kind. Badiarov's instruments have been played by renowned players such as Sigiswald Kuijken, Sergey Malov, and Ryo Terakado among others, in commercially released recordings and in videos posted on the Internet. Gut string makers Mimmo Peruffo and Damian Dlugolecki, among others, also contributed by creating the strings for the instrument. After Badiarov, many luthiers have been following in his footsteps, and some seem to specialize themselves in converting fractional cellos to the violoncellos da spalla. This instrument, at least on the Internet, is no longer a novelty to hear—it may soon get to the point where many music schools and conservatories around the world own one or more.

As Badiarov's violoncellos da spalla draw attention, notable musicologists, writers, and cellists also responded to the trend by commenting on the instrument and providing information and context surrounding it. However, not all comments affirm or support the trend; some try to negate the instrument's existence in music history, and some criticize its use in the informed performance field as ahistorical. Marc Vanscheeuwijck writes:

[1] Tully Potter, *Adolf Busch: the Life of an Honest Musician*, 2 vols. (London: Toccata, 2010), 1015. "Busch was such a big man with had such a long neck, he was able to hold it under the chin." This instrument is the first violoncello da spalla that I was able to examine and play. It is currently owned by Busch's granddaughter in southern Vermont.

> [...], I should note that — despite the recent fad that has introduced very small *violoncelli/viole da spalla* in the world of historical performance practice (and not only) — neither iconography nor documents of any sort suggest that slightly larger than viola-sized instruments (though with higher, 70–90mm ribs) may have played in the 8-foot range before the mid-1760s. Based on two Hoffmann 'originals' preserved respectively in Leipzig and Brussels, allegedly built in the 1730s but undoubtedly 19th-century forgeries, these minuscule cellos can only play in the 8-foot range when using at least one double-wound gut string, an innovation first mentioned only in 1767 or 1768 by Jean-Baptiste Forqueray 'le fils'. The earliest truly original instrument of that size may be the five-string instrument (*violoncello piccolo*) built shortly before 1762 by Johann Wagner in Borstendorf, Saxony, and preserved in Lübeck. Using such small instruments for any repertoire before the 1760s (especially J. S. Bach) is thus completely ahistorical and based on a double anachronism (they also produce a less-than-satisfactory sound, though I admit this to be a personal opinion). In short, instruments of such small sizes, even with higher ribs and dated before the 1760s, are undoubtedly 4-foot violas, and should not be utilized in at-pitch 8-foot repertoire. So much ink has already been spilled on this topic that I believe there is no need for more.[2]

His argument, for the most part, summarizes the general comments against the Hoffmann-type violoncellos da spalla. To organize his argument, there are mainly two parts:

A. The argument against the validity of Hoffmann's violoncellos piccolo
B. The argument against using the newly-built Hoffmann-type violoncello da spalla in the field of historically informed performance

[2] Marc Vanscheeuwijck, "Bowed Basses in Corelli's Rome" (Arcomelo 2013, Libreria Musicale Italiana, 2013), 177.

Argument B mostly depends on argument A to work. The itemization of the details of argument A would be as follows:

> A1. Neither iconography nor documents of any sort suggest that the Hoffmann-sized instruments may have played in the bass range before the mid-1760s
>
> A2. Two Hoffmann instruments [JCH 30 & 42] are undoubtedly 19th-century forgeries
>
> A3. At their string length, at least one double-wound string is needed to play at the bass range, but its innovation was first mentioned only in the 1760s

Let us examine those details.

A1. Neither iconography nor documents of any sort suggest that the Hoffmann-sized instruments may have played in the bass range before the mid-1760s

First, clarification of the organological terms *8-foot* and *4-foot* is necessary. The violins, violas, and cellos are all 8-foot instruments; they sound as notated. The term *8-foot* or *4-foot* typically does not indicate a range of a particular instrument, but rather how it corresponds to the notated pitch. A *4-foot* instrument would commonly mean an instrument that sounds an octave higher than the written notes indicate. What Vanscheeuwijck means by *8-foot range* is the range that includes the pitch an 8-foot-long pipe would produce (close to C2 at A=440). In his terms, a cello is an 8-foot instrument and a viola is a 4-foot instrument. To avoid confusion, here the *8-foot range* is called the *bass* range for simplicity.

As I already discussed in Chapter 1, mentioning Vanscheeuwijck, violoncellos varied in size and number of strings. As previously mentioned, the term *violoncello piccolo* does not appear outside of Bach's works during Bach's lifetime. Probably it was still a prototype when Bach called for it in his cantata for the first time.

The rarity of the instrument would explain why neither iconography nor documents of any sort suggest that a very small cello such as the Hoffmann type could play in the bass range. However, Bach's

original violoncello piccolo parts do point to the bass range and that cannot be disputed (Figure 2.1; it reaches the lowest note on the cello, C2). Vanscheeuwijck does not associate Bach's *violoncello piccolo* with the Hoffmann-type instrument, but Vanscheeuwijck brilliantly points out that "etymologically it would make sense to claim that the *violoncello piccolo* is indeed an even smaller bass violin than the already small bass violin that is referred to by the term *violoncello.*"[3] The instrument called *violoncello piccolo* was *abnormally* small, as the name implies; yet Vanscheeuwijck fails to connect it to the Hoffmann-type instruments. The smallest of all, the Hoffmann violoncellos piccolo from Leipzig are still extant. Bach and Hoffmann's relationship and physical proximity would only suggest, not negate, that Bach's violoncello piccolo would have been something similar to those surviving Hoffmann instruments.

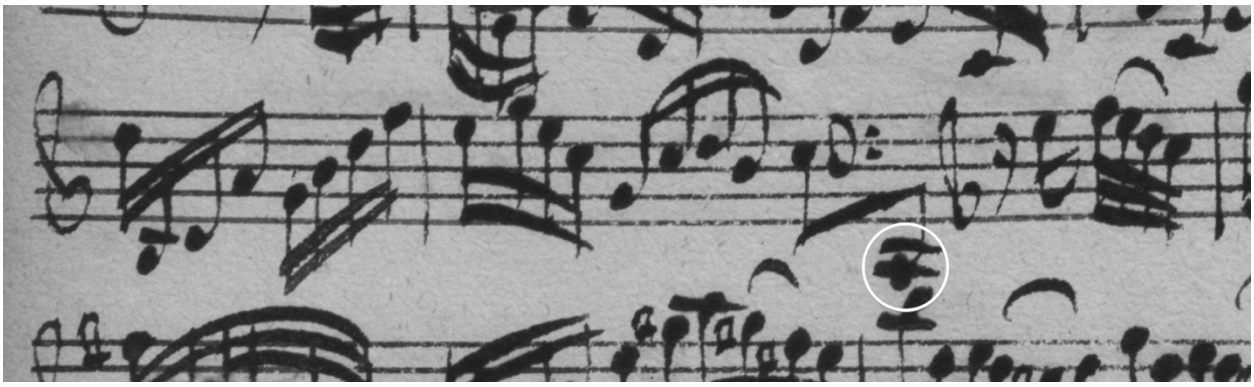


Figure 2.1. Violoncello Piccolo Part to BWV 41/4 (Holograph).

Another point regarding the range—Vanscheeuwijck argues that those minuscule instruments would have been at the normal viola range, even with the taller rib height. This notion is rather implausible if the tuning involved the high E string. At the vibrating string length of 42 cm (a rough average of the known violoncellos piccolo), the E5 string at A=415 Hz (c. 621 Hz) would break within a short period of time, if not immediately, according to Peruffo's working/breaking index of gut strings.[4]

[3] Vanscheeuwijck, "Recent re-evaluations," 186.
[4] "What is a string's breaking index?."

If the argument shifts to the idea that the Hoffmann violoncello had an alternate tuning other than E-A-D-G-C at the viola range, it then needs a musical work, for example, that was written in Leipzig with the finger-position notation common in the scordatura piece to prove it.

A2. Two Hoffmann instruments [JCH 30 & 42] are undoubtedly 19th-century forgeries

Vanscheeuwijck here ignores JCH 27 in Berkeley, California, or perhaps he was not aware of the Berkeley Hoffmann violoncello piccolo since it has not been scrutinized as much as those in Europe. Whether he was aware of it or not, his argument would have stayed the same, except that he may reconsider his argument after seeing the studies by Heller et al. in their 2015 book.[5]

It is true, according to Heller, that all three surviving violoncellos piccolo are not in the original state; they all went through some alterations.[6] However, they all likely to have preserved the original top and bottom plates, if not the ribs. When it comes to body size, the current state well represents the original. In the cases of JCH 27 (Berkeley) and JCH 42 (Brussels), the neck materials are original and were re-attached to increase the string angle to the bridge.[7] The overall lengths of those two instruments would not deviate substantially from the original lengths.

One hugely valuable resource is the set of images, including the side view, of the no-longer-extant JCH 46 (Leipzig) that was supposed to have the neck in the original state (Figure 2.2). It has a familiar baroque-violin-like neck whose underside line goes almost perpendicular to the body. Since the total length and some other measurements of this instrument were preserved, trigonometric evaluations of the images allowed the mensur-related values to be calculated fairly accurately. According to the

[5] Fontana et al., *Martin und Johann Christian Hoffmann*.
[6] Fontana et al., 392, 394, 402-03.
[7] Fontana et al.

calculations, its vibrating string length was 41.9 cm,[8] and that is absolutely the mean of JCH 27 and JCH 42 with the re-attached original necks.

One can say that those surviving instruments do represent well the original size of the Hoffmann violoncello piccolo. If Vanscheeuwijck still calls them forgeries, he must mean that all modernized legendary instruments of the baroque, such as the Stradivari, Guarneri, and others, are also forgeries.

[8] Fontana et al., *Martin und Johann Christian Hoffmann*, 211-12.

Figure 2.2. Images of Lost JCH 46 Violoncello Piccolo (before 1945).
Courtesy of the Archive of the Musikinstrumentenmuseum der Universität Leipzig.

A3. At their string length, at least one double-wound string is needed to play at the bass range, but its innovation was first mentioned only in the 1760s

It is true that a Hoffmann-type violoncello piccolo does need at least one double-wound string (the bottom C string) to play the notes below G2 acceptably. The following are the Acoustic Quality Index numbers of the Hoffmann violoncello strings, according to the specification given by Peruffo.[9] If the number is below 80, the string may get too inflexible and would need to be replaced with a wound or loaded string. A double-wound string would be considered for the index below 40. The Acoustic Quality Index is to be used only as a guideline when choosing strings, and is by no means accurate, as the quality of the strings always varies. However, it can give us referable figures to understand the different degrees of the flexural stiffness of the strings. For example, the index number of the violin G string (at 32 cm length and A=415 Vallotti) is 59, and thus most baroque violinists choose to use the wound G strings, although some may still prefer plain strings.

Table 2.1. Acoustic Quality Index of the Hoffmann Violoncello Piccolo Strings.

String (42.0 cm)	Frequency (at A=415 Vallotti[10])	Acoustic Quality Index*
E4	310.5 Hz	130
A3	207.5 Hz	87
D3	138.6 Hz	58
G2	92.6 Hz	39
C2	61.9 Hz	26

* rounded off to the nearest integer

The data above suggest that the Hoffmann violoncello piccolo would likely have had plain gut strings for the E and A, and wound strings for the D, G, and C strings. The bottom C string index is far below 40 which would indicate the need for a double-wound string, as Vanscheeuwijck discusses. However, the violoncello piccolo's supposedly needing a double-wound string is not a good reason by itself to negate the existence of the instrument. In the previous chapter, Bonta's observation was mentioned to explain the impact of the invention of the wound strings. Before the dawn of wound strings,

[9] "What is a string's breaking index?."
[10] This is not to say that A=415 Vallotti was the standard pitch and temperament in Leipzig in 1724.

all violin-family members suffered from some degrees of flexural stiffness on the lowest strings, and composers seem to have underused the bottom strings (i.e. simply utilized what was available to them). One could not deny the existence of a whole family of instruments just because the ideal bottom strings were not available at the time. However difficult it would have been to play the bass range on the C string Hoffmann had, his violoncello piccolo would certainly have had the string.

Vanscheeuwijck's point is also based on the assumption that it is unlikely for the people in Leipzig in the early 1720s to have found a way to add more density to the string without increasing the diameter too much. The process of winding a thin wire around a gut core is not overly complicated or facility-demanding, as Francesco Galeazzi implies.[11] Gut-string expert Daniela Gaidano writes that the wound strings "could even be made by the musician himself and not only by a specialized professional string maker and could thus be easily acquired."[12] According to Gaidano, it was luthiers who made wound strings, not the string makers, even in Bologna. It is not overly inconceivable that someone, if not Hoffmann himself, made double-wound strings in the 1720s. Also, whether Hoffmann himself innovated the design of his violoncello piccolo or it was Bach's invention as in the 1782 account of J. N. Forkel (assuming that by *viola pomposa* he meant *violoncello piccolo*),[13] it is quite doubtful that neither of them considered carefully what kind of strings would be needed for the instrument. Moreover, Hoffmann did not stop making the instrument at his first prototype; he made at least five more after 1730. Therefore it is reasonable to assume that he did not consider his violoncello piccolo a failure and that it actually worked in Hoffmann's, and possibly Bach's, views.

[11] Francesco Galeazzi, Elementi teorico-pratici di musica con un saggio sopra l'arte di suonare il violino (Rome: Pilucchi Cracas, 1791), cited in Daniela Gaidano, *Tables on the Evolution of Strings in the Violin Family* (2012).
[12] Gaidano, *Tables on the Evolution of Strings in the Violin Family*, 22.
[13] Hans T. David, Arthur Mendel, and Christoph Wolff, *The new Bach reader : a life of Johann Sebastian Bach in letters and documents* (New York: W.W. Norton, 1998), 368. Other accounts claiming that Bach was the inventor of *viola pomposa* include Georg Benda (1766), Johann Friedrich Köhler (c. 1776), Johann Adam Hiller (1784) and Ernst Ludwig Gerber (1790).

Still, how responsive and playable the bottom C2 string was on a violoncello piccolo is of keen interest. Examining the existing repertoire for the instrument, namely those nine cantata obbligato parts in Bach's cantatas, is in order. Skimming through the violoncello piccolo parts, one gets the impression that Bach definitely avoided and/or underused the C string. Out of nine cantata movements, only four use it (Table 2.2).

Table 2.2. J. S. Bach's Violoncello Piccolo Obbligato Parts.

BWV	First Performance	Movement	Strings Required
180/3	October 22, 1724	Choral arrangement (Soprano)	E4 – A3 – D3 – G2
115/4	November 5, 1724	Aria (Soprano)	E4 – A3 – D3 – G2 – C2
41/4	January 1, 1725	Aria (Tenor)	E4 – A3 – D3 – G2 – C2
6/3	April 2, 1725	Choral arrangement (Soprano)	E4 – A3 – D3 – G2
85/2	April 15, 1725	Aria (Alto)	E4 – A3 – D3 – G2
183/2	May 13, 1725	Aria (Tenor)	E4 – A3 – D3 – G2
68/2	May 21, 1725	Aria (Soprano)	E4 – A3 – D3 – G2 – C2
175/4	May 22, 1725	Aria (Tenor)	E4 – A3 – D3 – G2 – C2
49/4	November 13, 1726	Aria (Soprano)	E4 – A3 – D3

In the case of BWV 175/4, it does go down to the C string, but only for three notes, and all of them are F♯2 and doubled by the continuo—even if the C string did not speak at all, it would not be a loss musically. BWV 115/4, BWV 41/4 and BWV 68/2 are also similar cases, though their C string involvement are not as close to inconsequential as BWV 175/4. It seems that Bach was able to either avoid or minimize the C string uses, and when needing the C string, he supplemented it with the continuo or had it in the pre-existing harmony; he did not use the C string in a substantial way at all. The details on the individual movements will be discussed in the next chapter.

It is possible that those five movements without the C string would have been on a four-string violoncello piccolo (a tenor violin). In this case, the tuning of the four-string violoncello piccolo would be E4-A3-D3-G2, and it could have been something like JCH 35 that was lost during World War II. However, I personally do not think that having those five movements is good circumstantial evidence that they were on a four-string instrument. If that logic is applied to BWV 49/4, there should have been a three-string violoncello piccolo as well. Moreover, Bach did not specify the number of strings in those

parts, unlike the solo Suite VI. Understanding the circumstances above, it seems likely that Bach had just a five-string violoncello piccolo for his cantatas.

My assessment is that it is conceivable yet doubtful that Bach's violoncello piccolo had a C string that was supple and flexible. However, it had the C string that was at least manageable, and Bach's compromises are precisely the reason why those violoncello piccolo obbligato parts are how they are.

Using a newly-built violoncellos da spalla after Hoffmann's violoncello piccolo is neither ahistorical nor based on an anachronism, especially in the obbligato repertoire of J. S. Bach. I would rather argue that it is important to use a Hoffmann-type violoncello da spalla for those obbligato parts for the effect Bach was after. How about other repertoires, such as the cello suites? My assessment is in Chapter 4.

Chapter 3: J. S. Bach's Violoncello Piccolo Repertoire

There are nine obbligato parts in J. S. Bach's cantatas that call for the violoncello piccolo. There are two more parts that need to be mentioned here. One existing holograph continuo part to Mass in A major, BWV 234, is labeled "Continuo pro Violincello [*sic*] piccolo" at the top of the first page (Figure 3.1). It includes all movements except No. 4 *Qui tollis peccata mundi* which does not involve the continuo. It is certainly peculiar that Bach added the violoncello piccolo to his continuo group. The continuo part certainly does not avoid or underuse the notes in the C-string range, although its effectiveness was probably less important, as there were other continuo instruments playing the same part. One may speculate that a violinist used this part to lead the ensemble from the continuo, and thus the part needed to be fully figured. In any regard, this particular part should not be considered a significant role of the violoncello piccolo, thus it will not be examined in detail here.

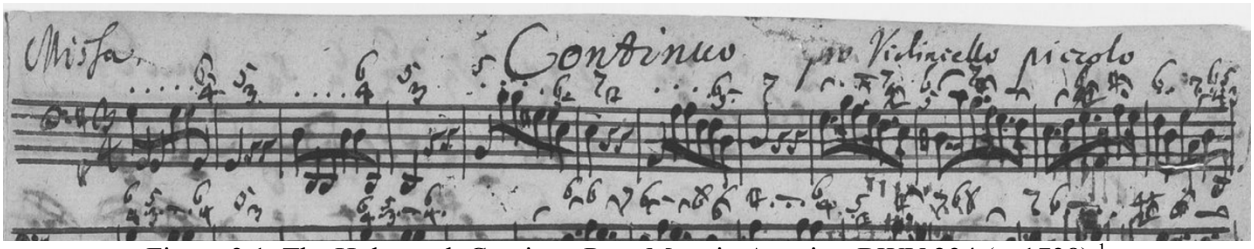


Figure 3.1. The Holograph Continuo Part, Mass in A major, BWV 234 (c. 1738).[1]

Another part to discuss is the obbligato part of BWV 199/6 (Leipzig version). This cantata was first performed on August 8, 1714, in Weimar. According to Klaus Hofmann, the part was initially given to the viola first (first Weimar version), then to the cello second (second Weimar version), to the viola da gamba third (Cöthen version), and then to the violoncello piccolo fourth (Leipzig version).[2] The violoncello piccolo part itself does not have the original instrument designation, but from the clef, it is likely it was for the violoncello piccolo. However, Hofmann adds that the part cannot be conclusively

[1] D-DS Mus. ms. 971, Faszikel 2, Darmstadt, Universitäts- und Landesbibliothek.
[2] Klaus Hofmann, foreword to *Mein Herze schwimmt im Blut, BWV 199*, by Johann Sebastian Bach, ed. Klaus Hofmann (Stuttgart: Carus-Verlag, 2014), 3-4.

classified chronologically—it might have been for a later repeat performance in Leipzig. Thus it is included at the end of my survey of the individual movements.

My observations of the violoncello piccolo repertoire include some basic information about the cantatas. The source information referred to is mostly from *J. S. Bachs Instrumentarium* by Ulrich Prinz and *Bach's Continuo Group* by Laurence Dreyfus with supplemental details from the *Bach Digital* website.

3.1. *Schmücke dich, o liebe Seele*, BWV 180, 3. Recitative [e Corale]

Cantata for the 20th Sunday after Trinity
First Performance: October 22, 1724
Known Repeat Performance: 1743-6
Original Source: D-Sba (o. Sign.) BWV 180 (Stuttgart) [Score]
Notable Source: D-B Mus.ms. Bach P 46, Faszikel 3 (Berlin) [score; copied from the set of original parts]
Starting Clef: Alto (Stuttgart Score), Treble (Berlin Score)
Key: F major; Meter: 4/4
Range: C3-B4

Example 3.1. BWV 180, No. 3, Incipit.

This movement starts with a secco-style recitative, and in the middle of m. 7, it transitions into a Choral arrangement with the violoncello piccolo obbligato part (example 3.1). The part is essentially a perpetual 16th-note motion on an 8th-note walking bass except for a few short breaks. The violoncello piccolo part in Bach's holograph score is written with an alto clef, but the score reconstructed from the set of the original parts in the early 1730s has it in treble clef.[3] It is essentially a sub-octave treble clef (equal to modern vocal tenor clef) and would sound an octave lower. This indicates that the part was intended to be played by a violinist. A violoncello piccolo part in alto clef would also be easily read by a violinist except if the player is also accustomed to playing the viola. It may rather be confusing for some violists to sight-read the notes in alto clef on the violoncello piccolo as the violists' instinct would be to do the fingering on the viola which ends up an octave lower on the violoncello piccolo. The treble clef as the main clef, with the bass clef covering the C-string range, is the most practical clef to read on the violoncello piccolo for violinists and violists.

This movement is one of five that do not involve the bottom C string. Considering the possibility that this movement was Bach's first attempt at employing the violoncello piccolo in his work, how he distributes the notes among four strings may shed some light on the condition of each string, or how Bach envisioned utilizing the instrument.

The total number of notes for the violoncello piccolo in this movement is 626. Dividing the pitches by the range of each string,[4] the E-string range has 191 notes, the A string 309, the D string 122, and the G string has only four notes that are all C3. It reveals the fact that a viola can completely cover the range and play the part easily—Bach's still calling for the violoncello piccolo, not the viola, tells a story. The percentages of the distribution are as follows (Figure 3.2).

[3] D-B Mus.ms. Bach P 46, Faszikel 3.
[4] A note is counted towards the string that can produce the pitch with its open string or with the lowest possible finger position on the fingerboard.

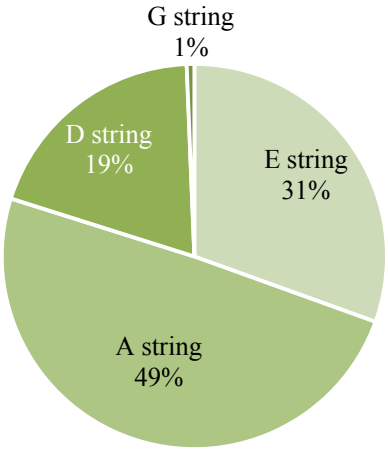


Figure 3.2. Distribution of the Violoncello Piccolo Notes in BWV 180/3.

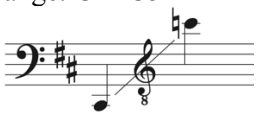
Clearly, he takes advantage of the top two plain-gut strings—which have 80% of the notes. The pre-conceived notion that a good composer would always use the entire gamut of the instrument for which a piece is written does not quite apply here. A plausible reason is that the disparity between the strength (the top two strings) and the weakness (the bottom two strings) of the instrument was paramount, or alternatively, Bach's idea about the part was particular to the timbre and musical idioms, and never about the full gamut.

Ulrich Leisinger writes in the foreword to his edition of BWV 180: "Bach obviously wanted to compensate for a temporary shortage of good cellists as the violoncello piccolo could be performed by a violinist or a violist."[5] But my observations above do not agree with his comment. At least in BWV 180/3 Bach would have expected the active and articulate sound out of easy tenor-alto range and its distinctive timbre from the instrument, not the typical cello sound that one would expect.

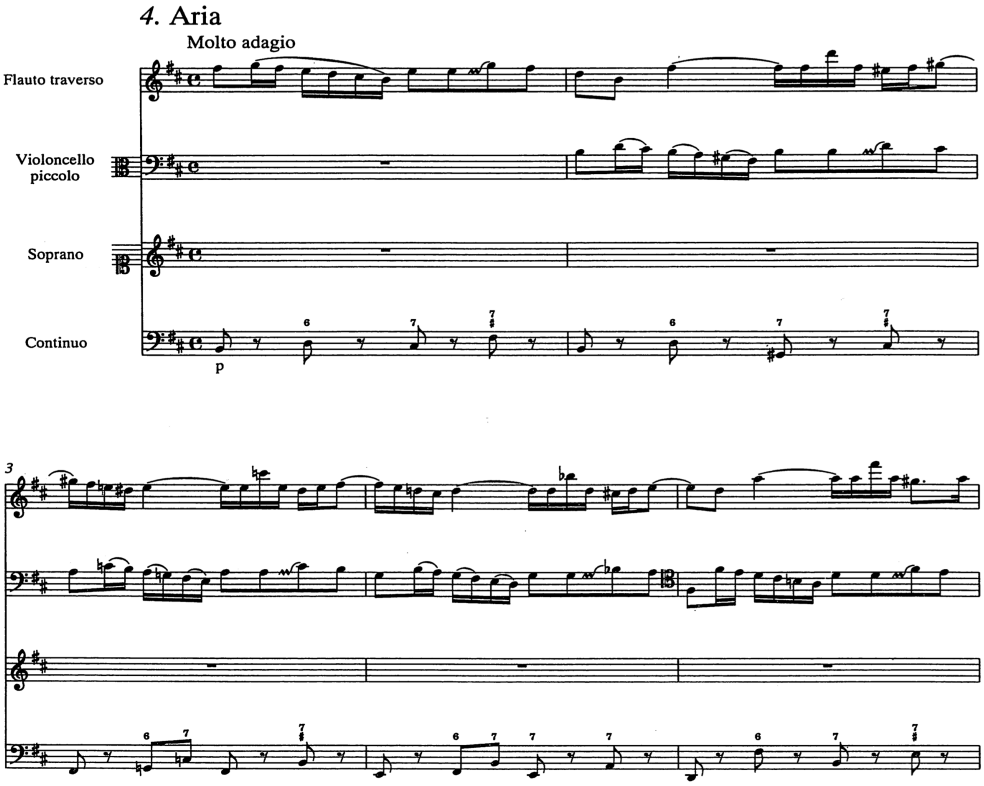
[5] Ulrich Leisinger, foreword to *Schmücke dich, o liebe Seele, BWV 180*, by Johann Sebastian Bach, ed. Reinhold Kubik (Stuttgart: Carus-Verlag, 1992), 2.

3.2. *Mache dich, mein Geist, bereit*, BWV 115, 4. Aria

Cantata for the 22nd Sunday after Trinity
First Performance: November 5, 1724
Original Sources: GB-Cfm MU. MS. 631 (Cambridge) [Score]
Notable Source: D-B 55 MS 10151 (Berlin) [Score; copied from the lost set of original parts]
Starting Clef: Alto (Cambridge Score), Treble (Berlin Score)
Key: B minor; Meter: 4/4
Range: C♯2-C5



This cantata was performed only two weeks after BWV 180. This violoncello piccolo obbligato part could not contrast more with the part from two weeks prior, despite the time proximity. One could say BWV 180/3 has an allegro character, and this is marked "Molto adagio" by Bach. The figuration in BWV 180/3 is rather jumpy and walking-bass-driven with broken chords, but this one is melodic and lyrical. The range in BWV 180/3 was less than two octaves, however, in this aria, the range spans almost three octaves.



Example 3.2. BWV 115, No. 4, Incipit.

In this aria, the violoncello piccolo is not the only obbligato instrument. In the ritornello, the flauto traverso and the violoncello piccolo duet in imitative polyphony on the light and detached continuo (Example 3.2). When the soprano part comes in, it is revealed that the motive that the flauto traverso and violoncello piccolo have been repeating was on the text "Bete aber auch dabei, mitten in dem Wachen (pray also, nevertheless, in the middle of the vigil)" which is the direct quote from the seventh verse of the Choral *Mache dich, mein Geist, bereit* (1697). The violoncello piccolo is the lowest of three melody parts, but it is certainly equal to other parts, and occasionally duets with the flauto traverso in the alto range without the tension in sound that is typical of the cello at a high position. One marked feature of this aria, in both the flauto traverso and violoncello piccolo parts, are the scattered quick minor sixth leaps up (see the flauto traverso part in Example 3.2, mm. 2–5, b. 3 of each measure). In the violoncello piccolo part, this figure, supposedly *exclamatio*,[6] appears six times in A section, and twice in B section (fourteen total when played through). This figure is equally used in the flauto traverso part, but the repeated use of this figure gives a violinistic impression.

The note distribution across all five strings in this part would be less lopsided than BWV 180/3, but to what extent is the question that needs to be answered. In counting the violoncello piccolo notes, two notes that are tied are counted as one. The E-string range has 128 notes, A string 317, D string 106, G string 43 and C string 23; a total of 617 notes is given to the violoncello piccolo. As expected, the top three strings occupy 89 percent of the notes (Figure 3.3).

[6] "Walther (*Lexicon*): The *exclamatio* or *ecphonesis* is a rhetorical figure which signifies an agitated exclamation. This can be realized very appropriately in music through an upward-leaping minor sixth." Dietrich Bartel, *Musica Poetica: Musical-Rhetorical Figures in German Baroque Music* (Lincoln: University of Nebraska Press, 1997), 268.

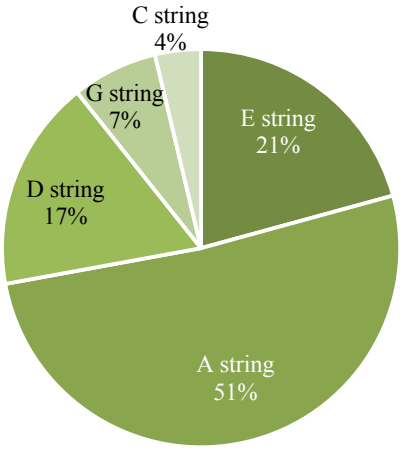
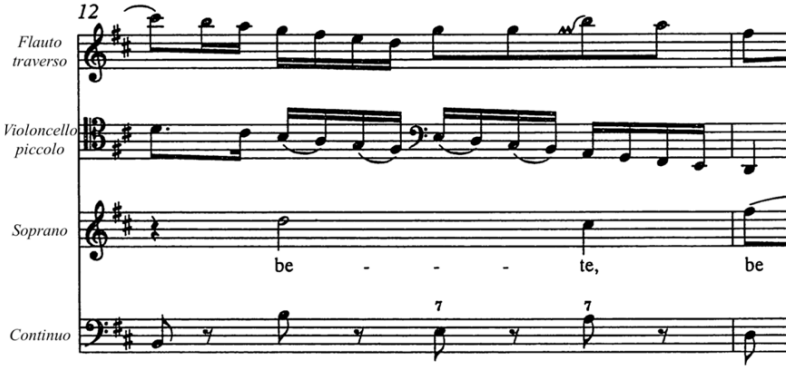


Figure 3.3. Distribution of the Violoncello Piccolo Notes in BWV 115/4.

Suppose Bach used the same violoncello piccolo from BWV 180/3 in this aria. Only two weeks apart, it is likely that the instrument had the same set of strings. It seemed in BWV 180/3 that he thoroughly avoided and minimized the bottom two strings. How he managed to use those low strings in this aria, especially the bottom C string, needs to be examined.

When a string is rigid, it is slow to respond to the bow. A difficult passage on such a string would be something fast and disjunct. The heavier the string is, the longer it takes to stabilize its vibration; thus slow and conjunct movement into the bass range, not jumping into it, is ideal.

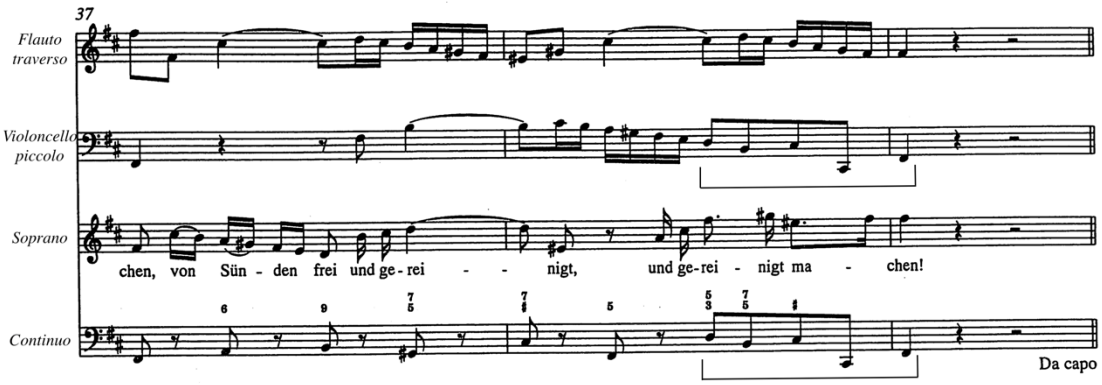


Example 3.3. BWV 115, No. 4, m. 12.

There seem to be two basic patterns in which Bach employs the low rigid strings. The first pattern is the long descending conjunct motion. In the case of m. 12 (Example 3.3), it is a two-octave long D-major scale descent. There is no better way to get down to the bass range than in the tempo of *molto*

adagio. Also, those descending lines are seemingly a musical-rhetorical device (*catabasis*) and are not employed as a significant contrapuntal fabric woven into the other parts. One descending line in the flauto traverso part also goes low for the instrument (reaches the lowest note of the instrument in D4); it is hard to imagine that Bach expected those notes on the low end of the lines to be heard clearly. Probably it was not mandatory for him to have good responsive C strings for the *catabases*.

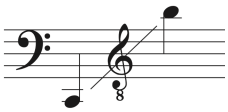
Another pattern is to let the violoncello piccolo join the continuo at low cadences (Example 3.4). In this exquisite aria, Bach keeps it simple when it comes to the cadential gestures. Melodically speaking, there are three cadential gestures that get repeated at the cadences without exception. Two are melodic gestures and another is functional-harmonic, typical of continuo. In the ritornellos, the flauto traverso and violoncello piccolo assume the melodic gestures at the cadences, but when the soprano part gets involved, the soprano assumes one of the melodic gestures and the violoncello piccolo becomes the odd one out—it just joins the continuo and does not get in the way of the top two voices. This works perfectly as it avoids adding another melodic gesture to the already perfect cadences, and the violoncello piccolo gets to obscure its weak bass range. Bach manages to utilize the instrument's forte and still hide the imperfect low strings while using the entire gamut of the instrument in this aria.



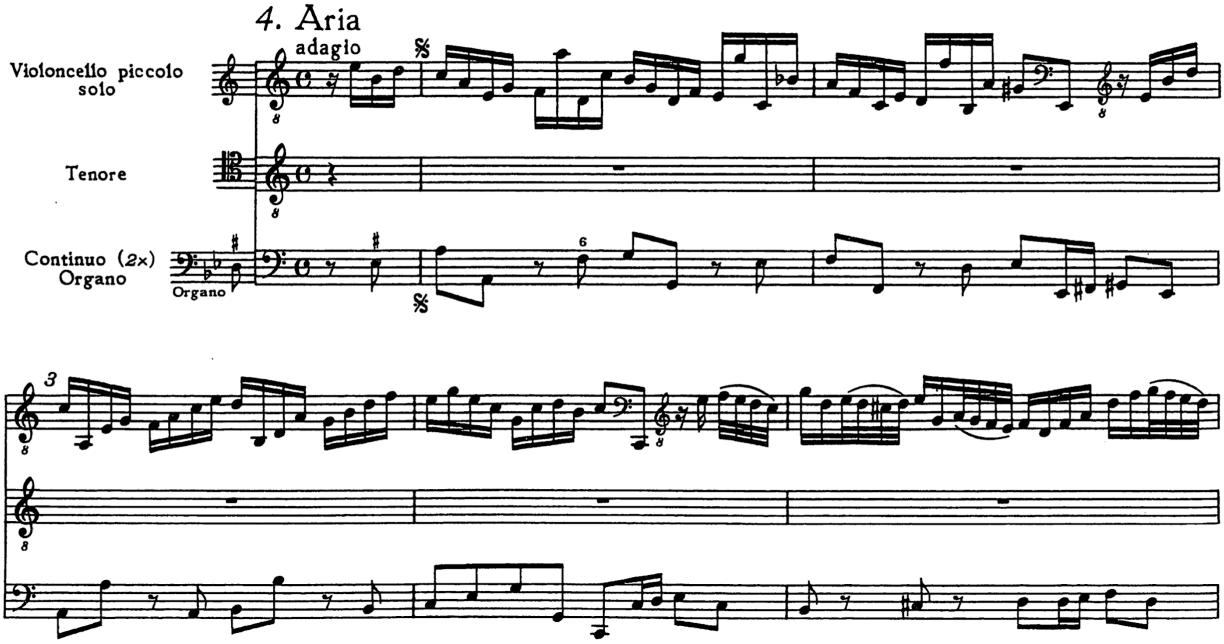
Example 3.4. BWV 115, No. 4, mm. 37–39.

3.3. *Jesu, nun sei gepreiset*, BWV 41, 4. Aria

Cantata for the New Year
First Performance: January 1, 1725
Original Sources: D-B Mus.ms. Bach P 874 (Berlin) [Score]
D-LEb Thomana 41, Faszikel 1 (Leipzig) [Parts]
Starting Clef: Treble (Berlin Score), Treble (Leipzig Part)
Key: A minor; Key: 4/4
Range: C2-B4



Eight weeks and one day after BWV 115, on the New Year's Day of 1725, Bach performed this large-scale festive cantata which includes three trumpets, timpani, three oboes, and violoncello piccolo in its force. The original set of parts is extant; the violoncello piccolo part was included in the first violin part—which suggests that a violinist played it from his chair in the violin section.



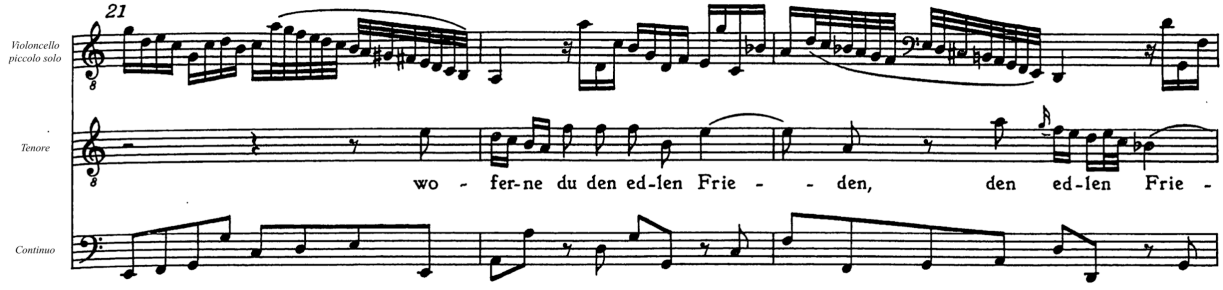
Example 3.5. BWV 41, No. 4, Incipit.

The writing of this obbligato is like a hybrid of the past two parts. It is marked with disjunct 16th-note lines, as in BWV 180/3 but even jumpier, yet it is marked *adagio* by Bach (Example 3.5). A disjunct line is followed by the line that flows with groups of 32nd notes under slurs. The amazing thing is that the seemingly jagged line sounds very lyrical when played, and this uniqueness makes this writing most

memorable. Just like BWV 115/4, Bach uses almost three octaves in this aria—this obbligato part's range is everything one can play all in the first position (one may opt to shift positions to remedy some awkward fingerings).

One notable difference between BWV 115/4 and this aria is that the violoncello piccolo part seems to be more soloistic in this aria in terms of treatment rather than being a part of chamber music. In BWV 115/4, the flauto traverso and violoncello piccolo keep weaving the whole way with or without the vocal part. There is only one whole measure rest at the beginning of the A section for the violoncello piccolo in that aria. On the other hand, in this tenor da-capo aria, the violoncello piccolo is not involved melodically when the tenor enters for the first time. And when the tenor comes to a pause, the violoncello piccolo resumes with its ritornello materials. As a matter of fact, the violoncello piccolo duets with the tenor only less than an eight-measure worth of music between the A and B sections (total 48 measures of music). The violoncello piccolo has a roughly 18-measure worth of rests among 86 full measures when played through. This treatment seems to signify the role, or the overall weight, of the violoncello piccolo part.

The handling of the low strings seems to be quite similar to BWV 115/4. Bach yet again repeatedly uses two-octave-long scales down, supposedly for rhetorical reasons (*catabasis;* Example 3.6). Another rhetorical device employed here often is the big interval leaping figure, involving the non-neighboring strings crossing, which is also violinistic (Example 3.6, m. 22, bb. 2 & 4; m. 23, b. 4).



Example 3.6. BWV 41, No. 4, mm. 21–23.

Those long descending lines and string crossing into the low strings are faster in terms of execution than in BWV 115/4; how well or badly the low strings responded is of keen interest. He also occasionally has the continuo double the violoncello piccolo part (Example 3.5, m. 2, b. 3) as we have seen previously in BWV 115/4, but it is also true that some of the low notes are a little more exposed than the previous two obbligato parts (Example 3.5, m. 4, b. 3)—though the lowest note here is not significantly important thanks to the continuo. It seems that Bach is getting increasingly confident and comfortable with his writing.

The note distribution across the strings is as follows: when played through (A-B-A), the total number of notes is 1,158, and the E-string range has 328 notes, A 465, D 256, G 83 and C 26. The top three strings have 91 percent of the notes.

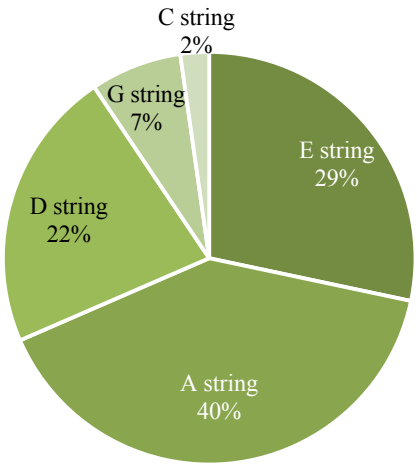
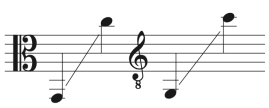


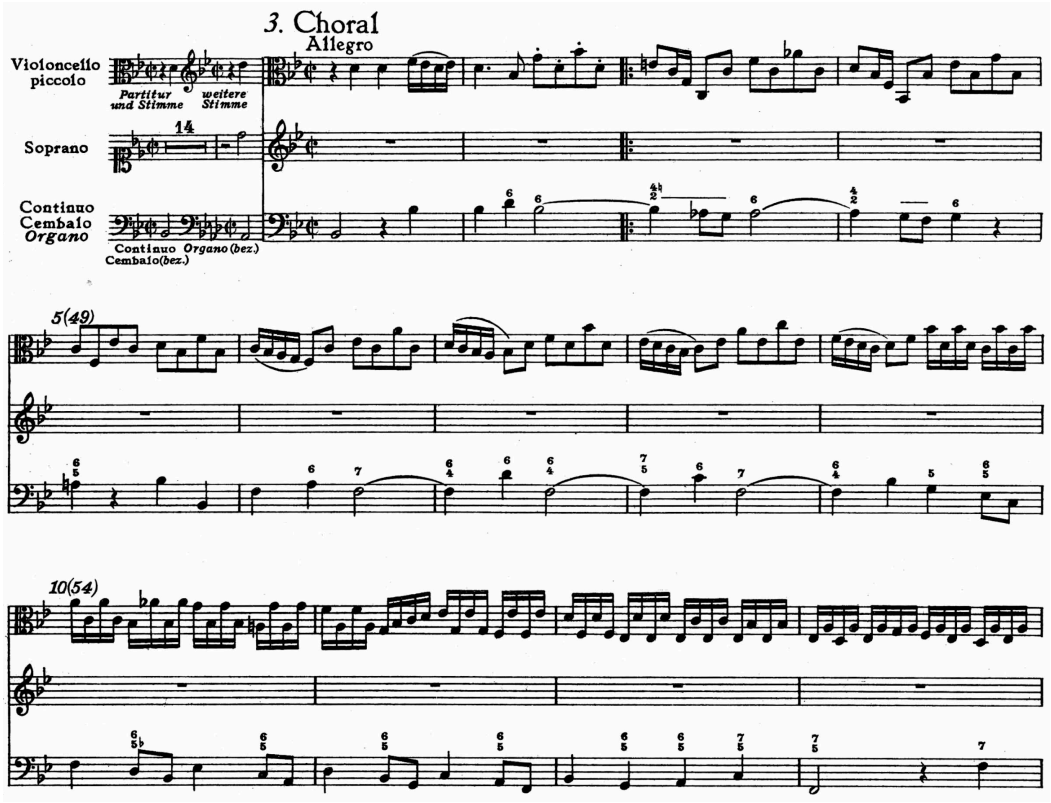
Figure 3.4. Distribution of the Violoncello Piccolo Notes in BWV 41/4.

3.4. *Bleib bei uns, denn es will Abend werden*, BWV 6, 3. Choral

Cantata for the Easter Monday
First Performance: April 2, 1725
Known Repeat Performance: Likely April 13, 1727
Original Sources: D-B Mus.ms. Bach P 44, Faszikel 2 (Berlin) [Score]
D-B Mus.ms. Bach St 7 (Berlin) [Parts]
Starting Clef: Alto (Berlin Score), Alto (Berlin Part), Treble (Berlin Part)
Key: B$^{\flat}$major, Meter: 2/2
Range: G2-C5



This cantata was performed a few months after BWV 41. Coming back from the soloistic writing of BWV 41/4, here he writes another obbligato part in a Choral arrangement similar to his first in BWV 180/3. This one is marked *Allegro* and is very jumpy and active as this marking indicates. Still prominent, similar to all previous violoncello piccolo writing, are the violinistic string-crossing leaps (Example 3.7).



Example 3.7. BWV 6, No. 3, mm.1–13.

The original set of parts for this cantata survives. The violoncello piccolo part appears in the first violin part, as was the case in BWV 41; however, it is in alto clef (Figure 3.5).

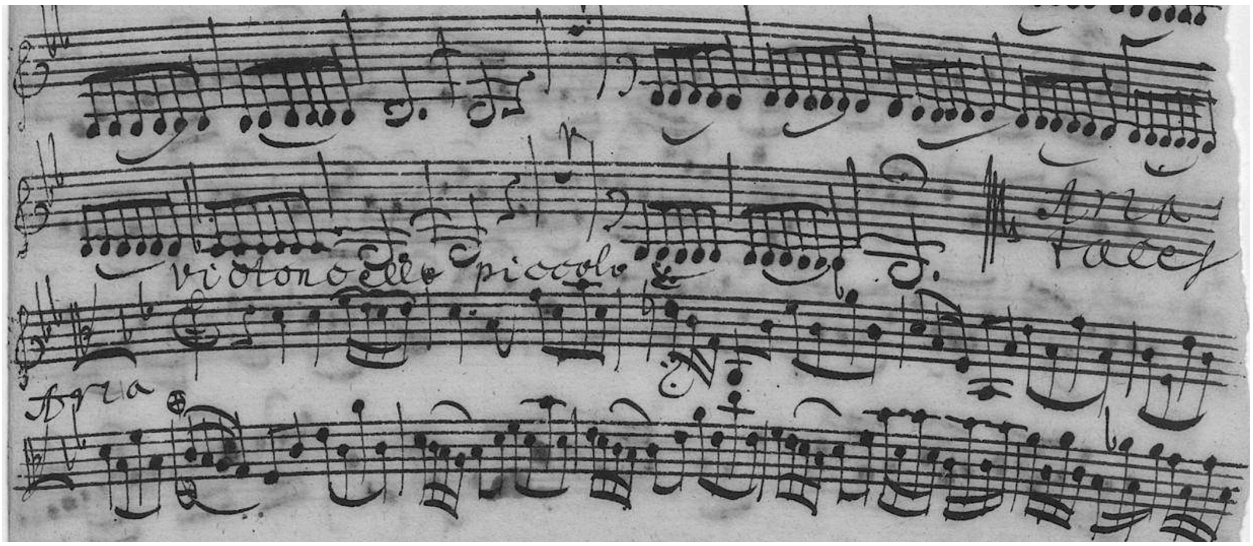


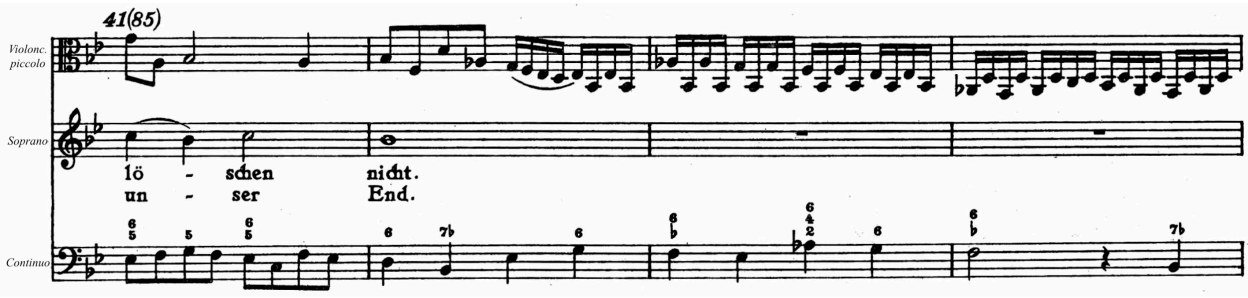
Figure 3.5. Original First Violin Part (Detail), BWV 6 (D-B Mus.ms. Bach St 7).

The copyist for this part is Johann Andreas Kuhnau (1703-after 1745)[7], nephew of Johann Kuhnau, Bach's predecessor. He is also the copyist of the BWV 41 violin part in which the violoncello piccolo part was written with the treble clef. One may wonder why he did not transcribe this violoncello piccolo part in treble clef as in the previous time, when he must have realized he was copying the part for a violinist. The reason should be simply that because, in the score, the violoncello piccolo notes were written in alto clef. As I discussed in chapter 3.1, a violinist may find it confusing to read the violoncello piccolo part in alto clef if the player is used to playing the viola. Interestingly, presumably for a repeat performance, a new part in treble clef was prepared, and it is written on the other side of a viola obbligato part for No. 2 which was for the oboe da caccia in the first performance. It is plausible that in the repeat performance, the violinist or violist who also played the No. 2 obbligato on the viola might have found the part in the alto clef too confusing to read from, and asked for a part in treble clef.

This violoncello piccolo part does not use the bottom C string at all, but one may get the impression that it features the robust low range of the instrument. It certainly does employ the G string in

[7] "D-B Mus.ms. Bach St 7," Bach-Digital, updated January 15, 2020. https://www.bach-digital.de/receive/BachDigitalSource_source_00002311

the way that had never been done in the first three obbligato parts; but not only that, the G string is used completely independently from the continuo part with repeated string crossings (Example 3.8). Was Bach able to obtain a new and supple G string that could speak at those passages? The question remains.



Example 3.8. BWV 6, No. 3, mm. 41–44.

There are 1,168 notes in the violoncello piccolo part when played through. The E-string range gets 250 notes, A 622, D 241, and G 55. Obviously, this ratio of distribution would be affected by the key and writing, especially whether it is the active and jumpy allegro type or the lyrical cantabile or adagio type. This allegro Choral arrangement can be compared to another Choral arrangement in BWV 180/3 which is also an allegro type and also without the C string. The G string usage in BWV 180/3 was only 1 percent, but in BWV 6/3 it has increased to 5 percent (Figure 3.6).

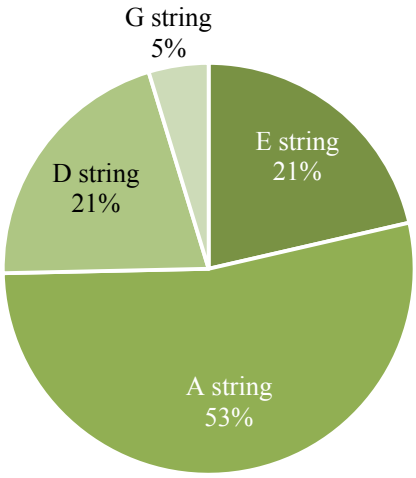
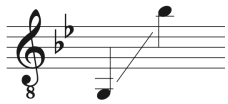


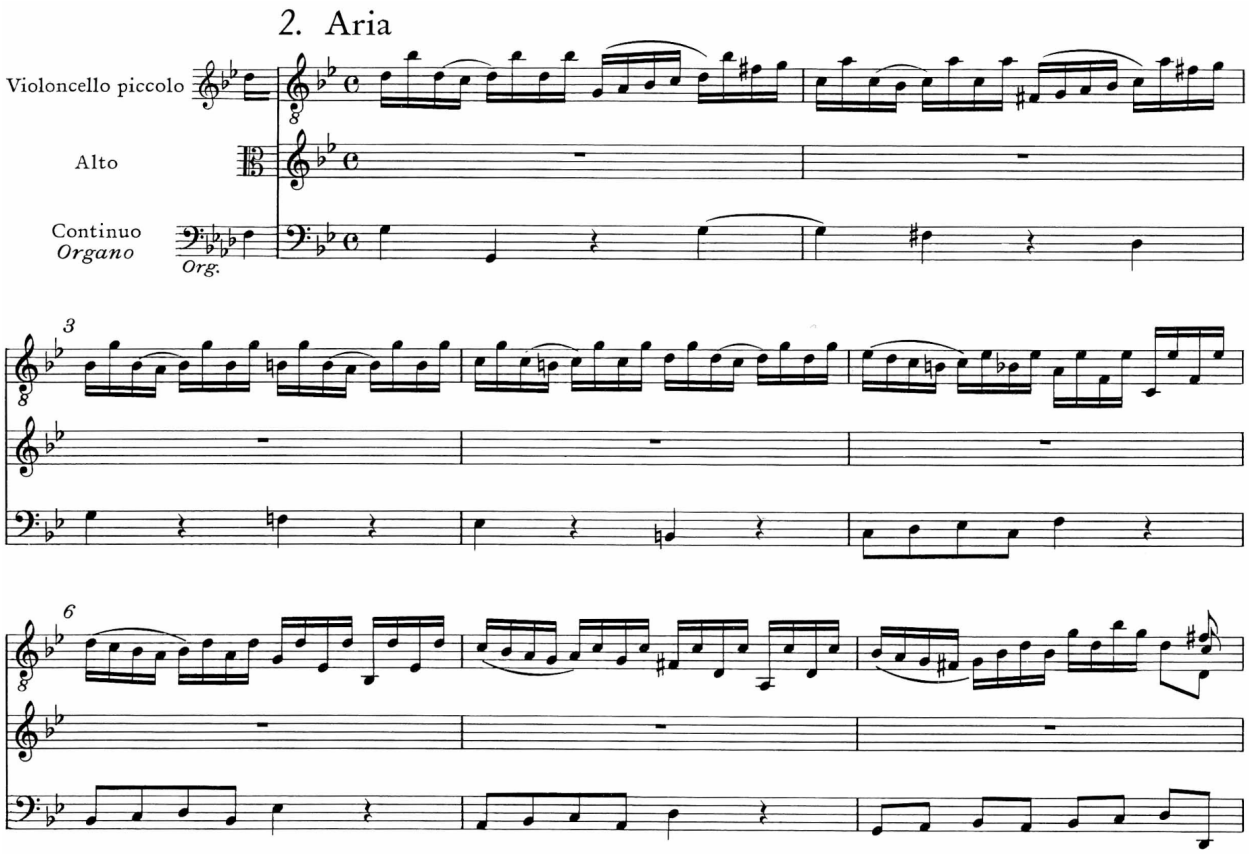
Figure 3.6. Distribution of the Violoncello Piccolo Notes in BWV 6/3.

3.5. *Ich bin ein guter Hirt*, BWV 85, 2. Aria

Cantata for the 2nd Sunday after Easter
First Performance: April 15, 1725
Original Sources: D-B Mus.ms. Bach P 106 (Berlin) [Score]
D-B Mus.ms. Bach St 51 (Berlin) [Parts]
Starting Clef: Treble (Berlin Score), Treble (Berlin Part)
Key: G minor; Meter: 4/4
Range: G2-B4



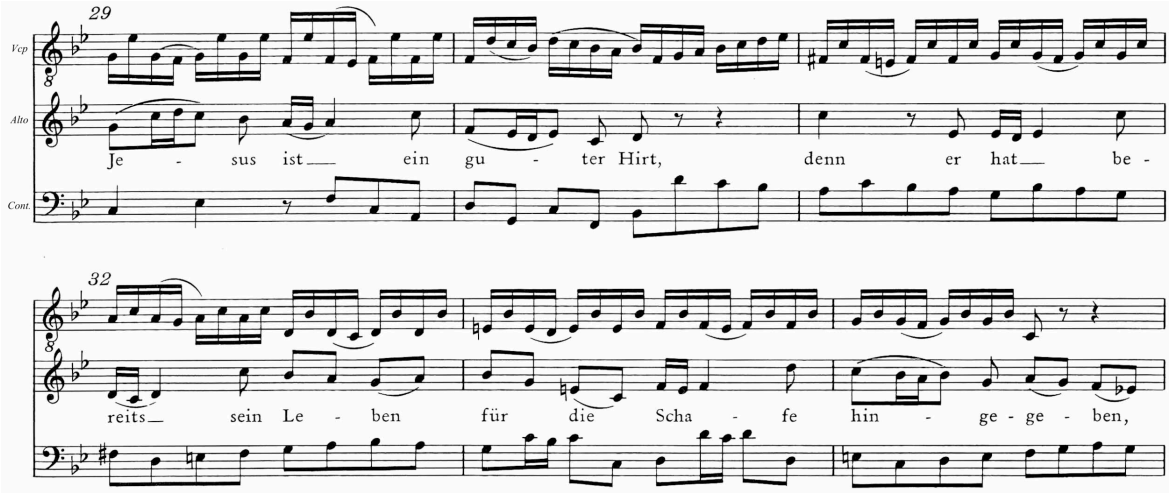
The original set of parts is extant. Unlike BWV 41 and 6, the violoncello piccolo part is an independent double-sided leaf. This allows flexibility with the violoncello piccolo assignment within the upper string section, but it might have been that the copyist, J.A. Kuhnau (the same copiest as the BWV 41 and 6 parts), simply forgot to include the violoncello piccolo notes in the first violin part.



Example 3.9. BWV 85, No. 2, mm. 1–8.

This cantata was performed on the second Sunday after Easter, about two weeks after BWV 6. From the time proximity, one can assume that the instrument and its condition were the same, and so was the player of the instrument. Some G-string notes are fully exposed, demanding a good responsive string as in BWV 6/3. The writing seems to support the assumption; it is an allegro-type obbligato part, and its figuration is fairly close to BWV 6/3. It is marked by the large interval leaps that include the non-neighbor string crossings (see Example 3.9, mm. 5–7, b. 4 of each measure). One prominant case is a major 11th leap (F4 to C3, skipping two strings in between; in mm. 14 and 16). Yet again, the writing is quite violinistic.

This is an aria in which a certain affect is typically expressed, but the clue to understanding this obbligato writing does not seem to be apparent in the text *Jesus ist ein guter Hirt* (Jesus is a good shepherd). This movement has a pseudo-da-capo structure; unusually for Bach, the whole text is repeated three times in this aria with a ritornello in between, and the third vocal entrance starts exactly like the first, sounding like da capo. A prominent rhetorical device appears the second time the whole text is stated (pseudo B section; mm. 27–40). When the second and third lines of the text *denn er hat bereits sein Leben / für die Schafe hingegeben* (For he [Jesus] has already given his life for his sheep) is sung, the violoncello piccolo and the continuo parts cross in multiple ways (Example 3.10, mm. 30–33). Those repeated crossings may rhetorically signify the cross where Christ has "given his life for his sheep."



Example 3.10. BWV 85, No. 2, mm. 29–34.

This is the first time Bach has the violoncello piccolo stick in the same range as the continuo, and go under it independently at times. It is important to note that he allowed the violoncello piccolo to balance with the continuo in the tenor range. Although the intertwining with continuo lasted only for a few measures, it showed Bach's confidence in the middle range of the instrument that he had not shown in the previous obbligato parts.

The third time the whole text is presented (pseudo da capo; mm. 41–53), Bach brings in another device that is a first for the violoncello piccolo part. While the obbligato part is repeating the ritornello material, the alto presents completely new material (*Vokaleinbau*)—this time intertwining with the vocal part. It brings the sense of dialectical synthesis and climax; the tight counterpoint between those parts on the driving continuo makes one realize that the seemingly technical and busy ritornello part for the violoncello piccolo was carefully and impeccably crafted to make this upsurge possible. It seems that Bach's violoncello piccolo writing has gone even further with this aria.

The note distribution across four strings is as follows: the E-string range has 175 notes, A 394, D 164 and G 27; the total is 760. In the case of this aria, this distribution ratio does not quite tell the story about the substantial involvement of the D and G strings. In the allegro-type movement, Bach has yet to employ the C string.

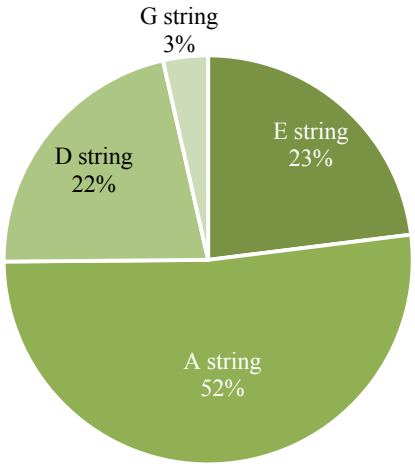
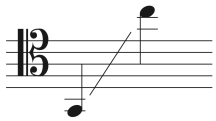
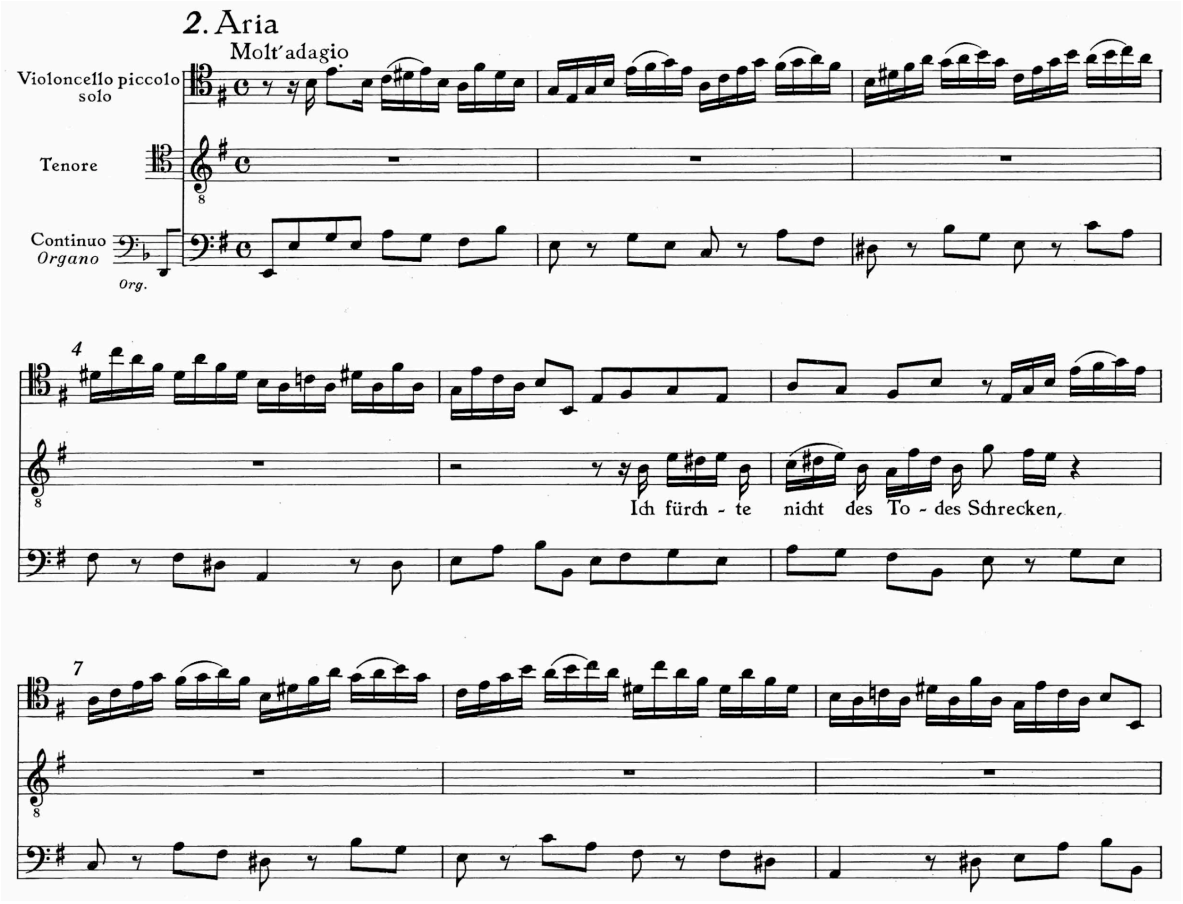


Figure 3.7. Distribution of the Violoncello Piccolo Notes in BWV 85/2.

3.6. *Sie werden euch in den Bann tun*, BWV 183, 2. Aria

Cantata for the 6th Sunday after Easter
First Performance: May 13, 1725
Original Sources: D-B Mus.ms. Bach P 149 (Berlin) [Score]
D-B Mus.ms. Bach St 87 (Berlin) [Parts]
Starting Clef: Tenor (Berlin Score), Tenor (Berlin Part)
Key: E minor; Meter: 4/4
Range: G2-C5

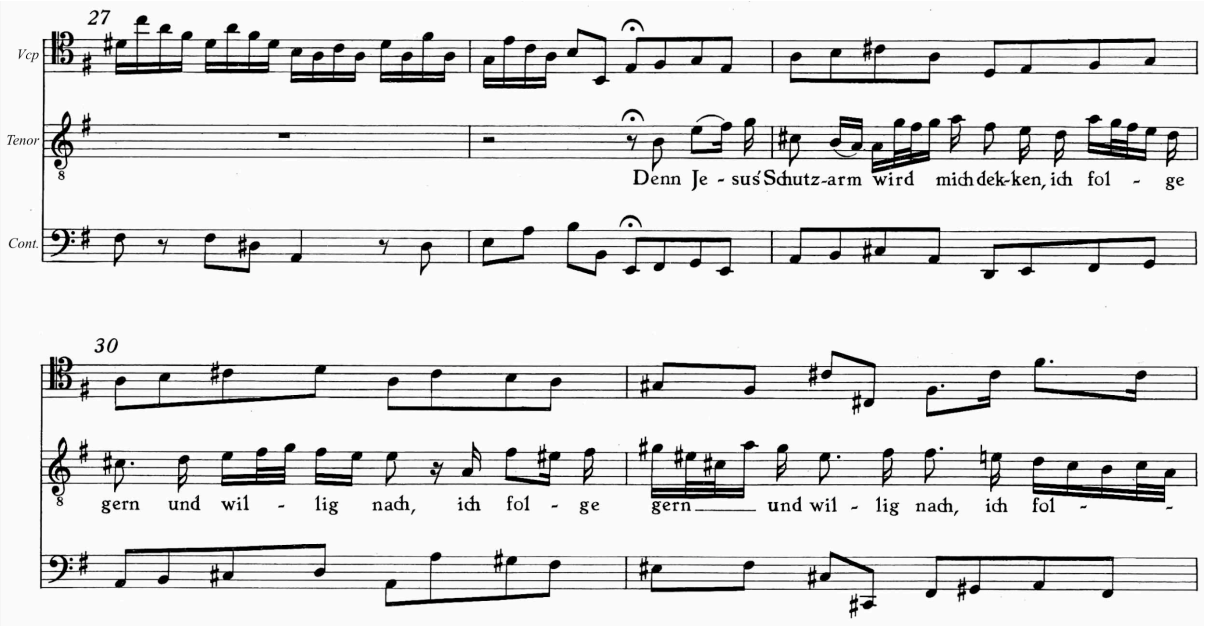




Example 3.11. BWV 183, No. 2, mm. 1–9.

Almost a month after the BWV 85 premiere this cantata BWV 183 was performed. There is an independently prepared violoncello piccolo part in the surviving set of parts. This is the first time the violoncello piccolo notes are provided only in tenor clef in both the score and the part. In the previous works, Bach used either alto or treble clef in the score. The tenor clef is not really a preferred clef for a

violinist; one can only conjecture why it is in tenor clef. A string player who benefits the most from having it in tenor clef would be a cellist—the violoncello piccolo player in this May 13 service might have been a cellist who mostly held the instrument *da spalla* and used the diatonic (violin) fingering, as that would have been within the scope of normality at the time, according to Vanscheeuwijck.[8] If the player of this part was a cellist sitting in the continuo group, it plausibly explains why Bach had the instrument double the continuo when it is not playing the ritornello materials (see Example 3.11, mm. 5–6 for an example). This is new; previously, the violoncello piccolo doubled the continuo only when it was in the bass range, mostly at a cadential gesture. In this case, the violoncello piccolo doubles the continuo when it could have been *tacet*, as it is in similar places in BWV 41/4. Those two parts in unison, however, start playing in an octave in the B section (Example 3.12, m. 28-). The sonority at the beginning of the B section is like having a 16-foot instrument. I assume that this octave playing is by rhetorical design, not a practical solution to the string problem of the violoncello piccolo.



Example 3.12. BWV 183, No. 2, mm. 27–31.

[8] Marc Vanscheeuwijck, "Violoncello and Violone," in *A Performer's Guide to Seventeenth-Century Music*, ed. Stewart Carter (Bloomington, IN: Indiana University Press, 2012), 233.

This aria shares some similarities with BWV 41/4. It is a tenor da-capo aria of the adagio type (marked "Molt'adagio" by Bach). The ritornello material has some broken chords yet the part sounds sentimentally lyrical at that tempo. The opening ritornellos in both arias are repeated in their entirety as the conclusions of the respective A sections (BWV 183/2 has a slightly different first full beat the second time). Both texts are introspective in nature. One contrasting element would be that the tenor writing is more elaborate and ornamental in BWV 183/2 than BWV 41/4. Bach writes nicely matching counterpoint out of the ritornello material for the violoncello piccolo in BWV 183/2 in the same range as the tenor when the violoncello piccolo is independent of the continuo. In other words, the violoncello piccolo in this aria has a lot more to intertwine with the voice than in BWV 41/4, and at the same time, it associates itself with the continuo part more than before.

Earlier, I made an assumption that the original violoncello piccolo player in this cantata was a violoncellist da spalla, not a violinist. This player might have been sitting in the continuo group, perhaps playing the rest of the movements on the player's larger violoncello da spalla. I wonder if Bach would have written the part any differently if the instrument was assigned to a violinist—if the original notes were in treble clef, I wonder if the part might have had more rests in between the ritornello materials, just like in BWV 41/4.

For the sake of comparison, here is the note distribution across the four strings used in this aria (Figure 3.8). When played through, the E-string range in the part has 372 notes, A 420, D 187 and C 30; the total number is 1,009. The E-string range gets 37 percent of the notes, and that is by far the highest number thus far (the second largest is 29 percent in BWV 41/4).

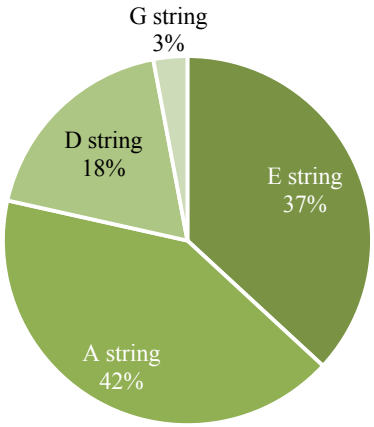
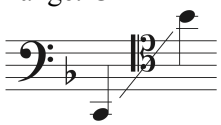


Figure 3.8. Distribution of the Violoncello Piccolo Notes in BWV 183/2.

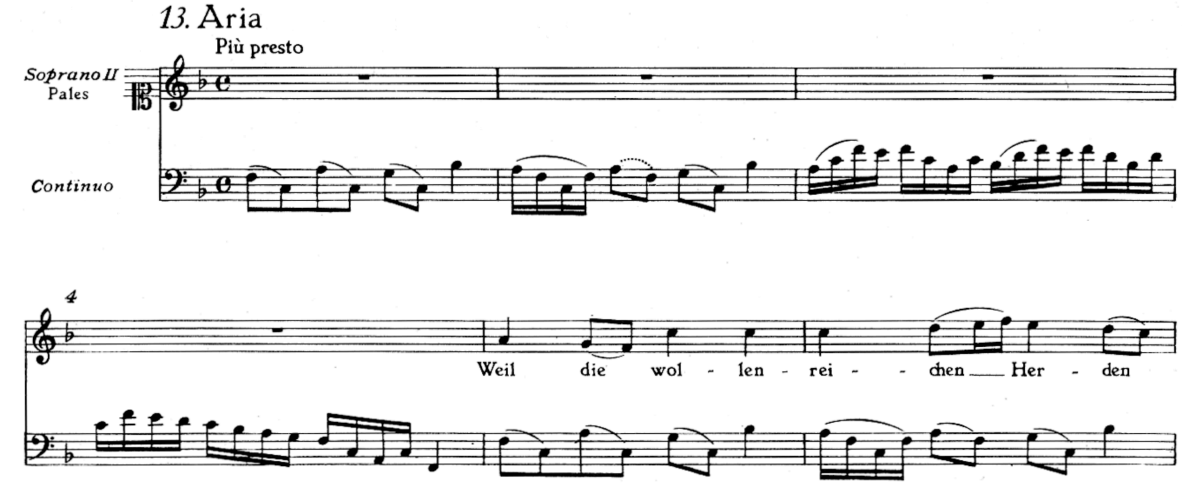
3.7. *Also hat Gott die Welt geliebt*, BWV 68, 2. Aria

Cantata for Whit Monday (Day after Pentecost)
First Performance: May 21, 1725
Original Sources: D-LEb Thomana 68 (Leipzig) [Parts]
Starting Clef: Bass (Leipzig Part)
Key: F major; Meter: 2/2
Range: C2-B♭4

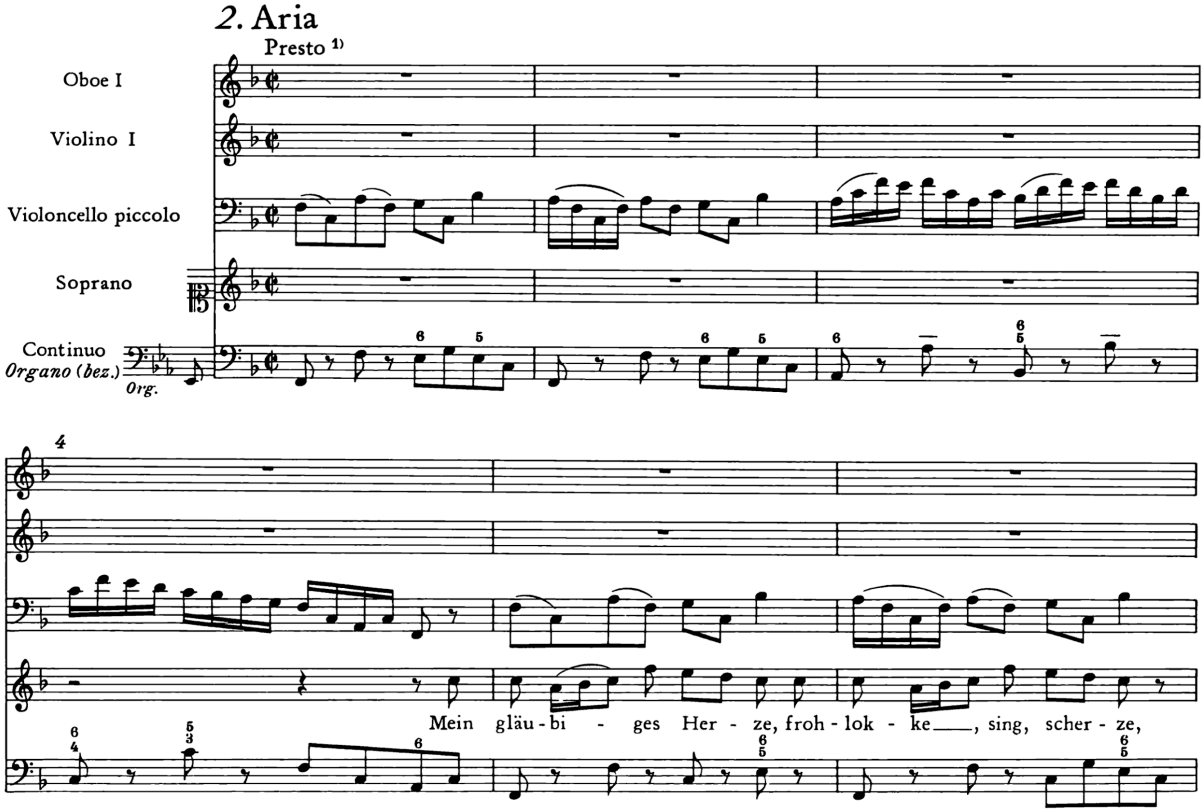


The original score did not survive, but the set of original parts did. The independent violoncello piccolo part was notated in bass and tenor clefs. Understanding that this cantata was performed only eight days after the previous one in BWV 183, it is reasonable to assume that the same instrument and the same player was used for the violoncello piccolo part as BWV 183/2. Thus it still makes sense that the part uses the tenor clef for the higher range instead of treble or alto clef.

This movement is an arrangement of Bach's earlier work, the soprano aria (No. 13) from the Hunting Cantata, *Was mir behagt, ist nur die muntre Jagd,* BWV 208 (1713). This is a continuo aria (see Example 3.13), and the continuo part here was reworked into the violoncello piccolo part (Example 3.14). However, it is not a contrafactum—the violoncello piccolo does go much higher than the original continuo line, and the soprano part gets completely new notes in this aria.



Example 3.13. BWV 208, No. 13, Incipit.



Example 3.14. BWV 68, No. 2, Incipit.

In the holograph score of BWV 208, a trio movement for the oboe, violin, and continuo (BWV 1040) is included; it is based on the same continuo line as BWV 208/12 and is assumed that it was performed together with the aria. Here in BWV 68/2, the trio movement is attached to the aria as an extended ritornello (mm. 53–79). The involvement of the oboe and violin is only in the ritornello.

From BWV 208/13 to BWV 68/2, there are some small fundamental changes. The tempo marking was changed from *Più presto* to *Presto,* and the meter was changed from 4/4 to 2/2. In the opening, the fourth note C3 in the continuo part in BWV 208/13 is now F3 in the violoncello piccolo part in BWV 68/2. The most substantial change, however, would be the addition of the new continuo part in BWV 68/2. The reason behind the change would highly likely be the simple fact that Bach had the whole continuo group for this cantata at his disposal, and there was no reason to let it rest during this movement. At the same time, it is conceivable that Bach considered the violoncello piccolo to be an obbligato instrument, not a continuo instrument, at least during the early days of the Hoffmann models. Still, the obbligato part in BWV 68/2 shows that it was written originally as a continuo part, and the tessitura appears to sit lower than the other violoncello piccolo parts despite some brief action up in the alto range (ex. mm. 23–24, 33–36).

Although it is marked *presto*, the character of the writing is still in the allegro type; it is characterized by pronounced string crossings and disjunct 16th-note runs. Its tempo is probably fastest among all surviving violoncello piccolo obbligato parts, and it would not help when dealing with the supposedly rigid C string, but all the C-string-note appearances in the violoncello piccolo part are the reiterations of pre-stated harmony from earlier in the same beat except the final note which is doubled by the continuo. Here again, if the C string did not articulate well, that would not have been much of a concern to Bach.

The note distribution across all five strings is as follows: the E-string range has 132 notes, A 376, D 279, G 126 and C 16; the total number is 929. As expected, the percentage of the E string at 14 percent is the lowest, and the D string's 30 percent and the G string's 14 percent are both the highest number thus far (Figure 3.9). It certainly shows that the part was originally written for a continuo instrument. It might have been Bach's experiment to use this obbligato instrument at a lower tessitura than before.

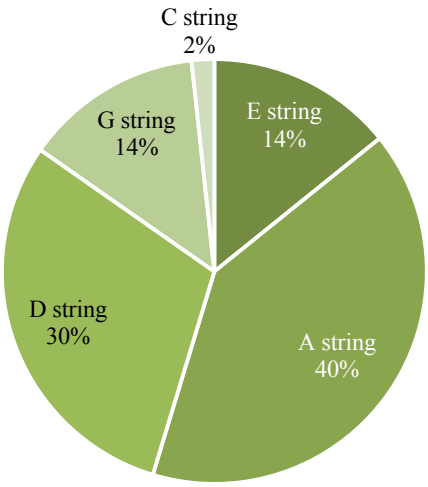
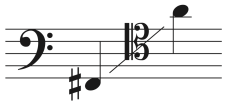


Figure 3.9. Distribution of the Violoncello Piccolo Notes in BWV 68/2

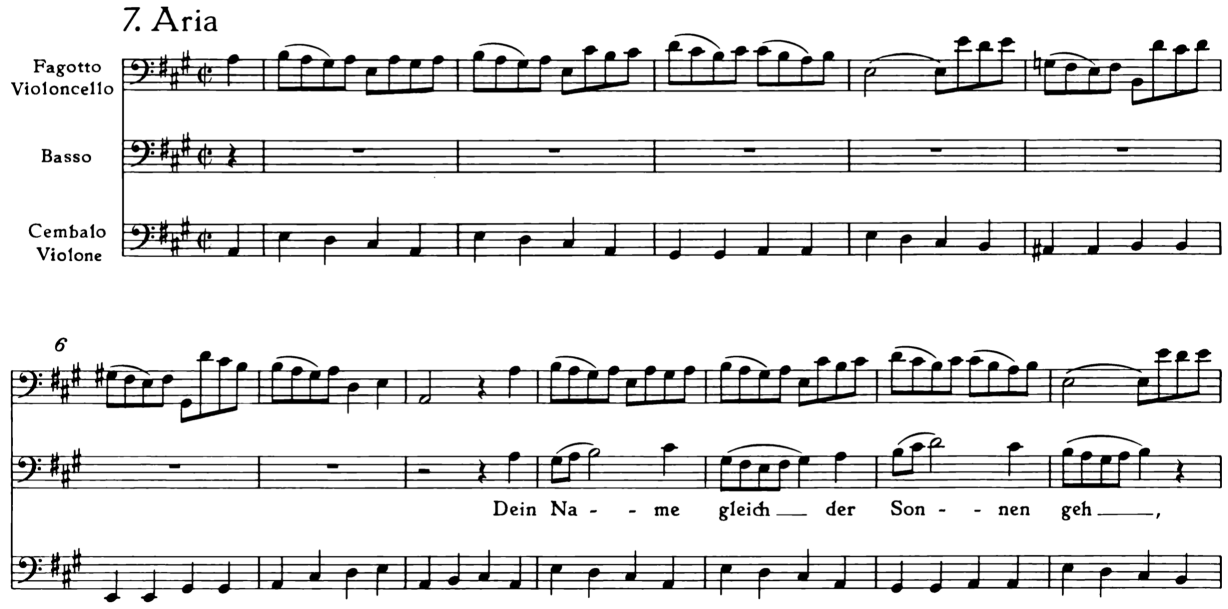
3.8. *Er rufet seinen Schafen mit Namen*, BWV 175, 4. Aria

Cantata for Whit Tuesday (3rd day of Pentecost)
First Performance: May 22, 1725
Known Repeat Performance: c. 1734/5
Original Sources: D-B Mus.ms. Bach P 75 (Berlin) [Score]
D-B Mus.ms. Bach St 22 (Berlin) [Parts]
Starting Clef: Tenor (Berlin Score & Part); Treble (Berlin Part)
Key: C major; Meter: 2/2
Range: F♯2-A4



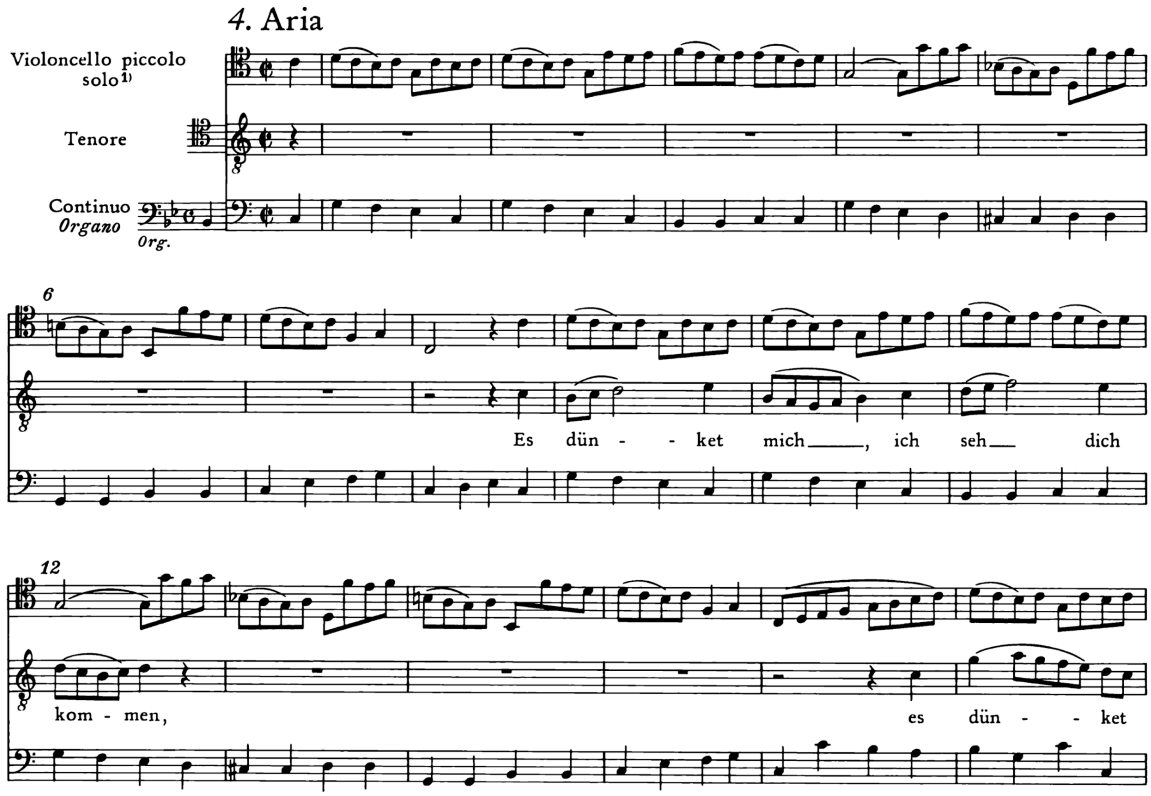
The day after Bach performed BWV 68, he had BWV 175 to perform, again with the violoncello piccolo. This makes it the third time in nine days that he had the instrument in his cantata force. From the time proximity, it is again reasonable to assume that the same violoncellist da spalla in BWV 183 and BWV 68 played the violoncello piccolo in this one—hence the tenor clef, both in the score and the part. In the surviving set of original parts, there is also another violoncello piccolo part in treble clef. It was supposed to be used in the repeat performance in 1734 or 1735, and that time Bach probably gave the part to a violinist.

As was the case in BWV 68/2, this movement is also a reworking of his earlier piece. The original movement was a bass aria in the birthday cantata (*Durchlauchtster Leopold,* BWV 172a) for Prince Leopold of Anhalt-Cöthen from 1722. This aria features the obbligato part for the cello and bassoon played in unison (Example 3.15).



Example 3.15. BWV 173a, No. 7, mm. 1–12.

In BWV 175/4, Bach makes it a tenor aria in C major, taking the bassoon-cello part to be played on the violoncello piccolo (Example 3.16). This is not a contrafactum either; however, this is much closer to the original BWV 173a/7 than BWV 68/2 is to BWV 208/13. The original text to BWV 173a/7 comes in four lines, and Christiana Mariana von Ziegler's text used in this aria is eight-line long. It must have been Bach's challenge to fit this text to the music. The original aria's stricture is broadly ABB' with the third and fourth lines repeated (lines 1-2, lines 3-4, lines 3-4). In this aria, Bach repeats the A section (mm. 1-32) to make it AABB' to accommodate eight lines of text, each section having two lines.



Example 3.16. BWV 175, No. 4, mm. 1–17.

Bach transposed it a minor third higher than the original, but he did not rewrite anything particularly higher to take advantage of the E string of the violoncello piccolo. The highest note in this aria, A4, is the lowest among eight violoncello piccolo movements that I have discussed thus far. Although this obbligato part was not originally intended for the violoncello piccolo, it still shows the same traits as other allegro-type obbligato parts for the instrument, such as disjunct restless runs (typically at 16th-note divisions; this time at 8th-note) and marked string crossings. Even when he does not specifically compose for the violoncello piccolo, Bach still seems to carefully select such movements to rework for the instrument.

This aria marks an end of Bach's seven-month endeavor to incorporate the violoncello piccolo in his church cantatas at a certain regularity, starting from October 1724. The next time he uses the instrument in a cantata that we are aware of is a year-and-a-half later.

The note distribution of the violoncello piccolo part across five strings is as follows: the E-string range has 140 notes, A 453, D 236, G 36 and C 3 (total 868). All three appearances of the notes on the C string are F♯2s, and all of them are doubled by the continuo. The E-string range usage at 16 percent is the second-lowest after BWV 68/2.

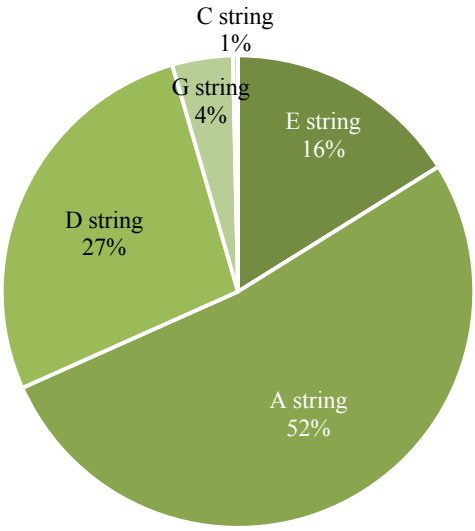
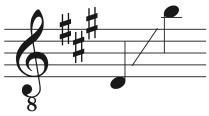


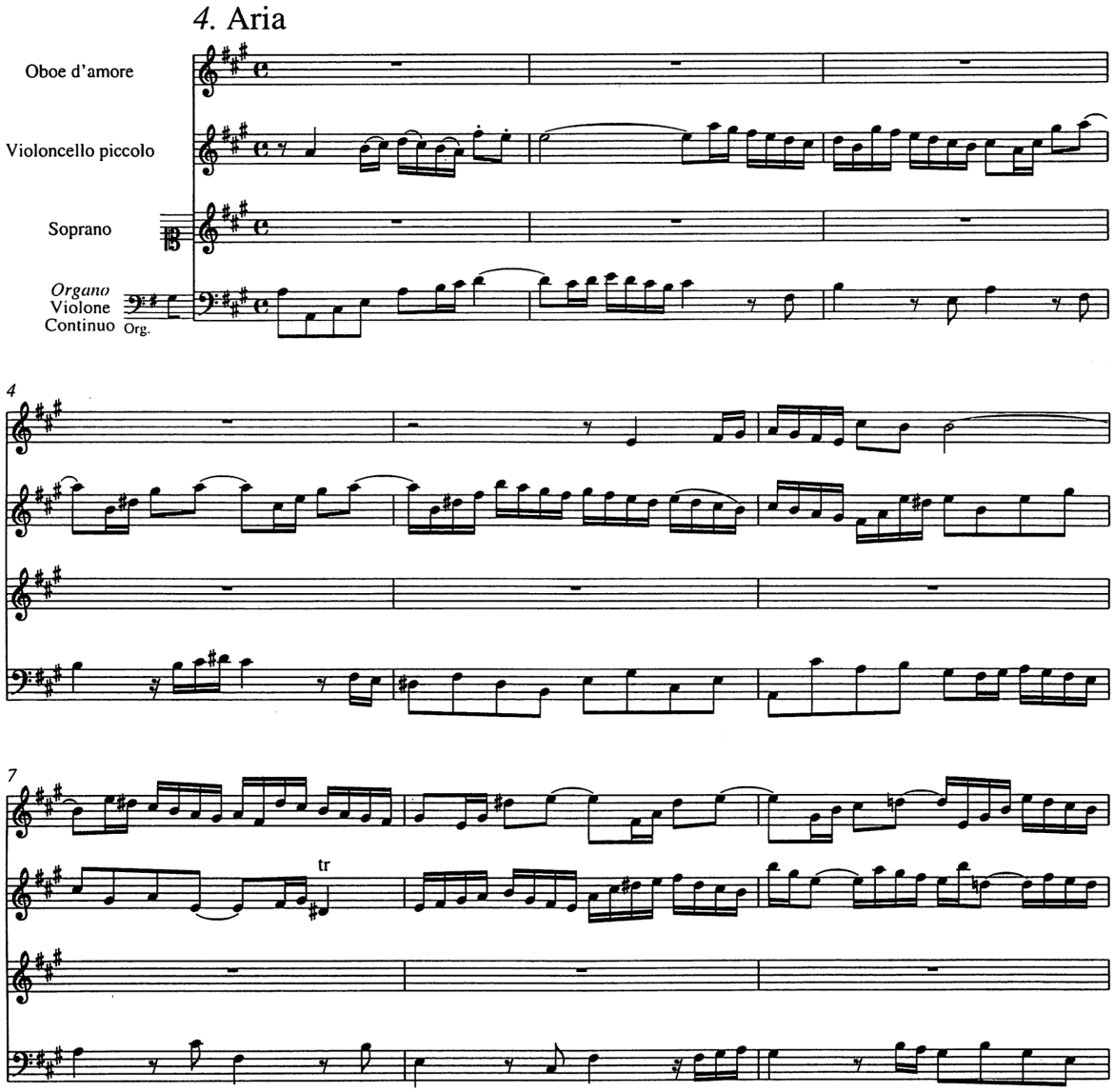
Figure 3.10. Distribution of the Violoncello Piccolo Notes in BWV 175/4.

3.9. *Ich geh und suche mit Verlangen*, BWV 49, 4. Aria

Cantata for the 20th Sunday after Trinity
First Performance: November 3, 1726
Original Sources: D-B Mus.ms. Bach P 111 (Berlin) [Score]
D-B Mus.ms. Bach St 55 (Berlin) [Parts]
Starting Clef: Treble (Berlin Score & Part)
Key: A major; Meter: 4/4
Range: D3-B4



This cantata is for the 20th Sunday after Trinity—coincidentally or intentionally, that is the day for which another cantata exploiting the violoncello piccolo was prepared, BWV 180 in 1724. BWV 180 is the earliest cantata with the violoncello piccolo that we know of, and thus comparing those two parts may shed some light on the development of the violoncello piccolo strings over two years.



Example 3.17. BWV 49, No. 4, mm. 1–9.

The violoncello piccolo part in BWV 49/4 has the narrowest range among all other violoncello piccolo obbligato parts. It's not only that a viola can actually play all the notes as written just like BWV 180/3, but also that it does not even use the G string at all—the top three strings are all one needs to play the whole obbligato part.

One thing that draws my attention is that this writing belongs to neither the allegro type nor adagio type that we had seen in other violoncello piccolo obbligato parts. It is not marked by the string-

crossing gestures or the disjunct line that wanders around. The writing is melodic and more cantabile than the others, comparable to BWV 115/4 to some extent, although it would be in a rather active tempo. Another similarity with BWV 115/4 is that the obbligato part has some rhythms. Unlike other obbligato parts, this part does not have many measures just filled with 16th notes. Those rhythms at a moderate tempo make this part unique and not repetitive. What ultimately caused this change from the previous violoncello piccolo parts is uncertain, but it is likely due to the multi-instrument contrapuntal obbligato writing.

Another obbligato instrument in this aria is the oboe d'amore. Both obbligato instruments, with their figurations, are described by Alfred Dürr to express the wedding garment mentioned in the text which is a metaphor for the justification of the sinner.[9] But in presenting a sonic metaphor for the adornment and the beautiful wedding garment, what comes to my mind is not oboe d'amore and violoncello piccolo. According to Michael Finkelman, the tone of the oboe d'amore was described to be more somber than the treble [oboe].[10] And the violoncello piccolo does not have a particularly bright or pure sound. Badiarov says that the sound of the Hoffmann-type violoncello piccolo strongly resembles a bassoon, and that the terms *viola di fagotto* and *fagottegeige* were colloquial names for a smaller instrument such as the Hoffmanns.[11] Figuration aside, the instrument choices by Bach and what Dürr describes do not necessarily match. Bach might have looked for the duller timbre from both the oboe and violin families of instruments. I cannot help but think that using the oboe d'amore and violoncello piccolo instead of the oboe and viola, for example, has a rhetorical and/or theological reason, whatever that may be.

Its structure is ABA'; very much like a da-capo aria as the A text comes back after B, but Bach fully wrote out the A' section still employing the materials from the A section. The opening ritornello

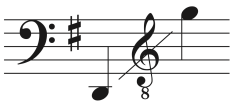
[9] Alfred Dürr, *The Cantatas of J. S. Bach*, trans. Richard D. P. Jones (Oxford: Oxford University Press, 2005), 596.
[10] Janet K. Page et al., "Oboe," (Oxford University Press, 2001). https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000040450.
[11] Badiarov, "The Violoncello," 129.

only comes back at the end, and another full ritornello in the dominant key (E major) is placed at the end of the A section. The instrumental materials between the ritornellos are conversational in nature, always responding to each other. Again, this is very different from other violoncello piccolo obbligato parts.

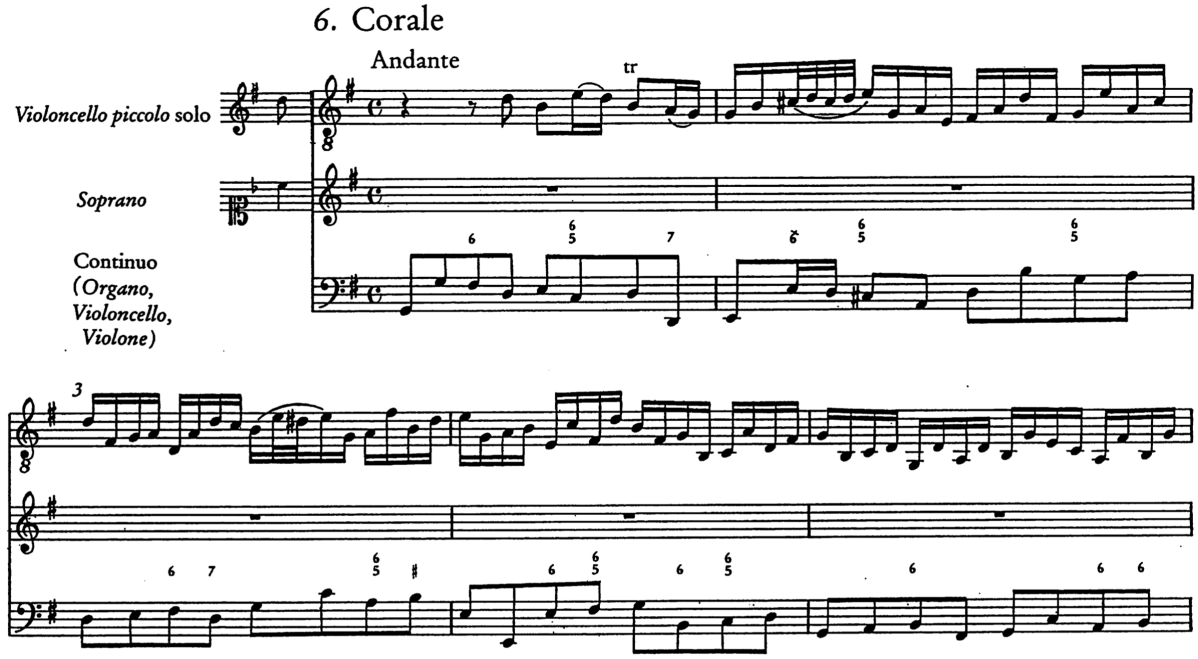
Since the violoncello piccolo part to this aria only uses the top three strings, the note-distribution ratio across the strings is irrelevant here. It takes full advantage of the easy tenor and alto tones of the instrument throughout the movement. The tessitura appears to sit much higher than others, especially in comparison with those Pentecost cantatas from the previous year.

3.10. *Mein Herze schwimmt im Blut,* BWV 199 [Leipzig Version], 6. Choral

Cantata for the 11th Sunday after Trinity
First Performance: August 8, 1723
Original Sources: D-B Mus.ms. Bach P 1162 (Berlin) [Score]
D-B Mus.ms. Bach St 459, Faszikel 3 (Berlin) [Parts]
Starting Clef: Treble (Berlin Part)
Key: G major; Meter: 4/4
Range: D2-G4



The history of this cantata is complicated. A popular soprano solo cantata, it was conceived in Weimar and premiered on August 8, 1714. In this performance, the obbligato part in the Choral movement (No. 6) was intended for the viola. In the repeat performance in Weimar, Bach reworked the obbligato part and gave the part to the cellist who also played the oboe in the performance. In its Köthen performance in 1720, the part was given to the viola da gamba. Later in Leipzig, a new part in treble clef was prepared, and it is assumed (the part is without the instrument designation) that the part was for the violoncello piccolo. Therefore, this part was neither originally written nor reworked explicitly for the violoncello piccolo—the only part existing as such. One cannot say that it is definitely for the instrument, but it is in sub-octave treble clef, and the most plausible player to prefer such a clef is a violinist playing the part on the violoncello piccolo.



Example 3.18. BWV 199, No. 6, Incipit.

The first performance of the Leipzig version of this cantata was August 8 in 1723. That is less than three months since Bach assumed the role of Thomaskantor in Leipzig. The independent violoncello piccolo part in treble clef has not been conclusively classified as the material that belongs to the first Leipzig performance. It is very likely that Bach did not have access to Hoffmann's violoncello piccolo that early in Leipzig, thus it is reasonable to presume that this part was for a later repeat performance in Leipzig.

Although this obbligato writing was for the cello originally, one could see the traits of the violoncello piccolo obbligato parts in this movement. It is marked *Andante* but it resembles the allegro-type obbligato writing very much with the disjunct 16th-note runs. Other than the BWV 115/4 and BWV 49/4 that are both double-obbligato arias, Bach was indeed specific about what to choose for the violoncello piccolo.

The original obbligato part to BWV 199/6 from Weimar was in F major (to be played in *Chorton*), and the Leipzig version was transposed to G major (to be played in *Kammerton*), but nothing

else was altered. The keys are different but the sounding pitches were not too far off; it is interesting to see how this obbligato part's note distribution across the strings looks. The total number of notes is 388; it is by far the smallest number. The E-string range gets only 24 notes, A 163, D 146, G 53 and C only 2. E-string range getting only six percent of notes shows, as empirical data, the nature of this part.

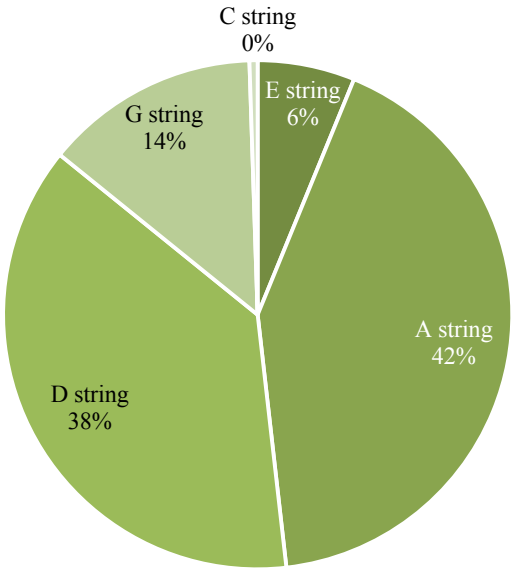


Figure 3.11. Distribution of the Violoncello Piccolo Notes in BWV 199/6

Chapter 4: Summary and Practical Implications

4.1. Violoncello Piccolo: A Hypothetical Historical Definition

In the late 17th into early 18th centuries, a violoncello was a bass instrument, or a small violone, which took advantage of the wire-wound gut strings innovated in Bologna in the 1660s. The wound strings allowed the violoncellos to be smaller than the typical violones, but the instruments' sizes and the numbers of the strings varied still in the early 18th century. The term *violoncello* subsumed both the five-string kind and *da spalla* kind of violoncellos then. Bach's specific *Violoncello piccolo* designations on his holograph scores suggest that a violoncello piccolo was not a typical violoncello–by the designations Bach meant a very small violoncello that was smaller than the full scope of the sizes the term *violoncello* might have suggested in 1724 Leipzig. For Bach, it was the instrument built by J. C. Hoffmann or another luthier with the vibrating string length as short as 42 cm. Due to its small body size, the sound was quite distinct. It came with five strings tuned in E4, A3, D3, G2, and C2. The bottom C string lacked suppleness, but Bach either entirely avoided, minimized, or employed the continuo to supplement, the notes in the C-string range. Alternatively, Bach perhaps considered it strictly an obbligato instrument in the liturgical context and did not require it to have a responsive C string or a stout bass sound. Its size allowed the violinists and violists to play it, with a neck strap, without much technical struggle. It is also plausible that it was reasonably easy to play for the cellists *da spalla* who played the instrument with a diatonic (violin) fingering.

4.2. Violoncello Piccolo as an Obbligato Instrument

What made the violoncello piccolo unique was not the number of the strings. It was not the instrument's wide gamut that inspired Bach to write those parts for it. As shown in the previous chapter, BWV 180/3 and BWV 49/4 parts are entirely playable on the viola, but Bach still called for the violoncello piccolo. The most distinctive characteristic of the instrument, besides the size, is the timbre,

and that is possibly what motivated Bach to start writing for the instrument in autumn 1724. The bassoon-like quality in the sound color makes the timbre unlike any other. With its sound, with the violinistic gestures, Bach's violoncello piccolo was able to give him a new color in his expressive palette. However, he did not call for it outside the liturgy. It may be that Bach used it to arouse specific theological affects in his arias and Choral movements. Miriam Bolduan discusses as follows:

> In the nine arias now to be considered, he presents the mystery of the integration of God and man in Jesus and the equally mystically relationship of Jesus and the believer. For such symbolism, these intermediate strings are unequalled. The out-of-the-ordinary timbre suggests an instrument which is at one and the same time both a *viola* and a '*cello*, and yet, neither. Either the *viola pomposa* or the *violoncello piccolo* presents a not quite understandable sense of the reconciliation of unlikes.[1]

Whether one agrees with the notion that it presents a sense of the reconciliation of unlikes or not, the timbre is indeed out-of-the-ordinary, and it may symbolize something definite. In that sense, it was functional and effective as an obbligato instrument in a liturgical work. However, this out-of-the-ordinary-ness might have been the reason why it was not utilized in the secular context.

Observing those nine obbligato movements in the previous chapter, one thing that became clear is that the instrumentations in those movements were all such that the violoncello piccolo did not need to blend with anything else. Its two double-obbligato movements are both with woodwind instruments (flauto traverso and oboe d'amore), and everything else is solo. It is my personal experience that whenever I played the violoncello da spalla with a viola and a cello, I was told that my sound did not blend with them because the sound was too different. Having such a peculiar sound can be a negative attribute in some situations.

[1] Miriam F. Bolduan, "The Significance of the "Viola Pomposa" in the Bach Cantatas," *Bach* 14, no. 3 (1983): 13-14, http://www.jstor.org/stable/41640184.

4.3. Violoncello Piccolo as a Cello

In the historical context, a violoncello piccolo was a kind of cello, but the violoncello piccolo did not represent the cello as a whole in terms of timbre, dynamic range, role/function in an ensemble, and its capability. It is unreasonable to assume that a violoncello piccolo could do everything the cello repertoire demanded. Two of many possible reasons why the violoncello piccolo did not become a mainstream instrument are that the violoncellos piccolo could not replace the cellos and that the role of the violoncello piccolo was too narrow and specific.

With modern technology, however, a violoncello piccolo today (most commonly referred to as violoncello da spalla) can have a flexible and responsive C string, whether it be double-wound gut-core or tungsten-core. The instrument can play the cello repertoire as long as its range does not get too high.

A violoncello da spalla allows the violinists and violists to explore the world of bass instruments. In an educational setting, a violin student could play the bass accompaniment for the student's colleagues to get to know the pieces and their underlying harmony better. It can also be a useful tool for a violin teacher. A violist who is passionate about playing the Bach Cello Suites can finally play them in the right octave, and in the right key in the case of Suite VI. As for me, it is a joy to play this instrument, however difficult it may be—I feel that I have finally found my own voice with it.

4.4. Violoncello Piccolo as a Continuo Instrument

To quote Johann Mattheson again, the violoncello da spalla "has a great effect on the accompaniment because it can cut through strongly and the sound can be expressed purely. A bass can never be more distinct and clearer than on this instrument." It is unclear what he exactly meant by the term *Viola di Spala* as he does not offer the size description, but this description certainly draws a picture of the sound of the present-day violoncello da spalla. The higher playing position would have helped as well. To be clear—*Viola di Spala* and Bismantova's *Violoncello da Spalla* might have been close in size,

but the size connection to the Hoffmann-type instruments need to be substantiated before reaching the conclusion.

Going back to the distinctive sound of the violoncello da spalla, it can be a double-edged sword. When one needs to hear the continuo line in a small chamber group, using the violoncello da spalla can be effective. Very high and active continuo lines seen in the Handel sonatas, for example, may be more practical on the violoncello da spalla than on a larger cello. However, as the main melody instrument in a Bach cantata continuo group, I suspect that it is not quite satisfactory; the way a typical cello can blend with the organ, allowing other instruments such as bassoon and violone to lean in on it, is not something one can expect from a Hoffmann-type violoncello da spalla. At the same time, if a bassoon is not available in an oboe ensemble, the violoncello da spalla may make an adequate replacement. It largely depends on the repertoire and the size of the force.

It may not be able to replace the cello, but one can lead an ensemble effectively on the violoncello da spalla. The higher playing position and the near-vertical bow movement make the playing-leading easy to do, still from within the continuo section. Except for some occasional *Bassetgen* movements, the continuo part usually contains all movements, unlike a violin part. Moreover, with the figures, a continuo part could give a player a fuller context of the piece without the score. If an ensemble had multiple excellent upper string players but was missing its good cellists, putting an upper string player in the continuo group on the violoncello da spalla may be a good allocation of a personnel resource, pending the player's agreement.

4.5. Bach and the Violoncello Piccolo

My hypothetical definition of the violoncello piccolo above makes it consequently implausible that Bach meant his Cello Suites (BWV 1007-1012), especially Suite VI, to be played on the violoncello piccolo (the Hoffmann-type violoncello da spalla). After the survey in the previous chapter, I doubt that the violoncello piccolo had an adequate C string for an unaccompanied cello repertoire during its early

years. The Cello Suites were intended for the *violoncello*— that is, *any* cello (including today's violoncello da spalla), held vertically or horizontally, suspended or supported from underneath. The premise on the lack of quality C strings also negates the notion that Bach had Hoffmann build the violoncello piccolo as his ideal instrument to play the Cello Suites. It is quite plausible that Bach composed them on a violoncello da spalla, but I imagine his instrument was much larger than the Hoffmann-type. His hands were so large,[2] he could just play a larger instrument without the C-string conundrum to enjoy his own cello repertoire.

My definition also explains why Suite VI, BWV 1012, is *à cinq cordes* and not *pour petit violoncelle*—because it was not written for the violoncello piccolo in the historical context. The same thing applies to the violoncello part to *Gott is mein König*, BWV 71; this part was likely for a five-string instrument, but it is designated only as *violoncello* appropriately.

The definition stays hypothetical, especially about Bach and Hoffmann's violoncello piccolo, because the actual connection between them cannot be substantiated. Bach and Hoffmann's relationship grew over time, and Bach was listed in Hoffmann's will as one of his five dearest friends.[3] However, no evidence or indications from their time could be found about the violoncello piccolo (or the viola pomposa) and the alleged collaboration between the two men when this instrument came about. Still, the fact remains: Bach did call for the instrument *violoncello piccolo* at least nine times in his liturgical works, eight of them in the same span, from October 1724 to May 1725. Even if his violoncello piccolo was not by Hoffmann, someone made a tiny cello that ultimately drew Bach's attention. By the time Bach repeated some of those cantatas in the 1730s, Hoffmann's instrument would have been accessible.

A Hoffmann-type violoncello da spalla is a fascinating instrument. I am happy to play it, and I am happier to know more about it. It is an instrument that enables me to perform the amazing cantatas that

[2] "[…] nearly 8 1/2 inches from wrist to fingertips—and its reach, as much as 10 1/4 inches from thumb to last finger with the hand open wide." Ines Bellinger, "The Musical Greatness of Bach's Hands," *National Geographic*, September 2019, 35.
[3] Fontana et al., *Martin und Johann Christian Hoffmann*, 72.

employ it, a tool that enables me to conduct lectures and workshops on Bach internationally, and a treasure that gives me spiritual sustenance when I play Bach on it privately.

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